

John D. ...

FINANCIAL TIMES

America is just wild about wisdom, Page 14

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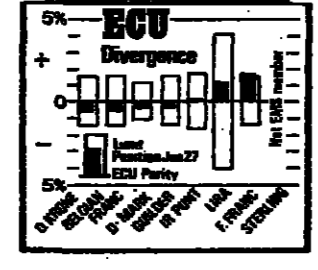
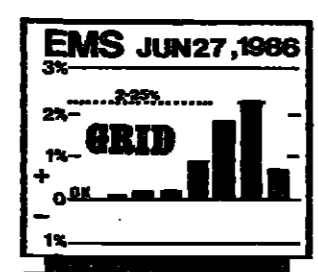
World news Business summary

Poland prepares partial amnesty

The Polish authorities are prepared to free some political prisoners because of the waning influence of Solidarity, the outlawed trade union, General Wojciech Jaruzelski said at the opening of the country's first Communist Party Congress since 1981.

US fears over fall in chip orders

A SHARP decline in orders has worried the US semiconductor industry worried that its recovery may have stalled. Page 22



its divergence limit. The D-Mark failed to make any progress against the French franc despite strong signs that West German interest rates would not be encouraged to fall.

World Cup win

Argentina beat West Germany 2-1 in the World Cup final.

Peru coup warning

Former West German Chancellor Willy Brandt, who returned from a visit to Peru last week, said that there was an imminent danger of a coup there.

Pope for Colombia

Pope John Paul will leave Vatican City tomorrow for a week-long trip to Colombia. He will visit the site of Armero, the city buried last year when the Nevado del Ruiz volcano erupted.

Bomb attack foiled

Police found 40kg of explosives planted near the West German nuclear power station of Gundremmingen, police in Bavaria said. Letters demanding closure of the plant were also found.

Camp evacuated

Twenty-one wounded Palestinians were evacuated from two refugee camps as Lebanese troops enforced a peace plan to curb fighting between Amal and Palestinians in Beirut's Moslem sector.

Air raid 'kills 5'

Iran said Iraqi aircraft bombed two villages, killing five civilians and wounding 28, after Iraq gave a warning of a new "war of cities" over Iranian missile strikes against its northern oil town of Kirkuk. Iran denied attacking residential areas.

Murderer hanged

Youssef Issakan, 38, was hanged in a Tehran square near the home of a woman and two children he killed in April. The dawn execution was watched by 200 people.

UK election pointer

The British Government's legislative programme to be outlined in the Queen's Speech in November will be lighter than in the past three years to allow for a possible general election in the autumn of 1987. Page 18

Hindus arrested

Indian police arrested more than 100 Hindu militants in pre-dawn raids to try to avert violence during a Hindu protest in the Punjab state.

Fishing boat seized

Spanish coastguards seized a French fishing boat and seven crew in Spanish waters off the Basque coast close to a disputed fishing ground.

Branson's record

Richard Branson's Virgin Atlantic Challenger II crossed the finishing line off south-west England more than two hours inside the previous record for a transatlantic sea crossing.

Reagan likely to shift emphasis of Pretoria policy

BY REGINALD DALE, US EDITOR, IN WASHINGTON

THE REAGAN Administration has begun a major reappraisal of its policy of "constructive engagement" towards South Africa, in the light of continuing intransigence by Pretoria and pressure from the US Congress, a senior US official said at the weekend.

Although the review would probably lead to a "shift of emphasis" in US policy, it was not likely to involve support for further US economic sanctions, which Mr Reagan continues to oppose. Rather, it would concentrate on trying to promote a dialogue between the white government and moderate black leaders, the official said.

In that context, the official revealed that Washington had quietly opened indirect contact with leaders of the banned African National Congress (ANC), which Administration conservatives had in the past denounced as a Communist front. So far, the purpose of the contacts was mainly "information gathering."

Washington would also put out feelers to Mr Oliver Tambo, the president of the ANC, who held his first official talks with the British Government at ministerial level in London last week, the official said. Washington was reported to be

working closely with Britain, which shares its opposition to sanctions, to try to foster a negotiated settlement.

The policy review was being conducted by the State Department and the National Security Council and would produce recommendations for Mr Reagan in a few weeks, the official said. It could lead to expanded and more open contacts with black leaders, although Washington would try to avoid the more Marxist-leaning members of the ANC and other opposition groups.

The review comes amid mounting frustration in Washington over Pretoria's declaration of a state of emergency earlier this month, despite Mr Reagan's repeated appeals for restraint, after the increased level of violence and reports of the growing radicalisation of young South African blacks. The Administration is also concerned that Pretoria appears to be becoming more combative of world opinion.

At the same time, pressure for more US sanctions is growing despite the recent House approval of legislation that would impose a complete trade embargo on South Africa, except for imports of certain strategic materials. The Bill would give US companies six months to

close their operations in the country. Although the legislation has little chance of approval in the Republican-led Senate, the White House is fully aware that the general mood in Congress is in favour of tougher action.

The US would still continue to remain "engaged" in South Africa to try to influence the Government, the official said. Under the policy of "constructive engagement", Washington has been trying to work through behind-the-scenes diplomatic manoeuvres rather than sanctions, which it argues to be ineffective and damaging to the black community.

Nevertheless, a senior official said that one reason for the policy review was the recent report by the Commonwealth Eminent Persons Group, which concluded that Pretoria was not interested in negotiating with the US and other countries to impose wide-ranging economic sanctions.

The official added that Washington believed that the Commonwealth group had given up too early. The Administration would now like to pursue a similar attempt to seek a negotiated solution in co-operation with the UK Government.

Mission to South Africa defended by Howe

By Peter Riddell in London

SIR GEOFFREY HOWE, the UK Foreign Secretary, yesterday clarified his mission to South Africa next month had the backing not just of the EEC but also of the world opinion.

His comments were made in face of widespread criticism of the agreement on Friday by the EEC heads of government to send Sir Geoffrey to South Africa and meanwhile to delay any decision on the imposition of sanctions.

No date has been fixed for the visit, but it is almost certain to be towards the end of July, depending on talks with the Pretoria administration about the status and scope of the mission. This would be just before the Commonwealth leaders meet in London in early August. There were further reports over the weekend about possible Commonwealth diplomatic reprisals against the UK if sanctions are not agreed then.

The British approach is being closely co-ordinated with Washington and Tokyo, and a meeting is possible, though not yet confirmed, next month between Sir Geoffrey and Mr George Shultz, the US Secretary of State, especially since the Soviet Foreign Minister will be visiting London in a fortnight's time.

During an interview on BBC radio, Sir Geoffrey stressed the international nature of current discussions. He said it was "very important" for his mission to be seen in the role of Britain's presidency of the EEC at the invitation of the 12 member countries, so that "any unwillingness to respond to that mission will not just be saying no to me or Margaret Thatcher but to the whole weight of the European Community."

Stressing the "foolishness" of driving the Pretoria administration into a laager, he said he would not be going with "a big stick" but with the aim of supporting those who wanted change, including a large part of South African political and business opinion and even part of the Government. He would be going with "the overwhelming weight of common sense and moral justice felt by the whole world."

At the end of his six-day visit to South Africa and Zambia, Mr Denis Healey, the UK Labour Party's shadow Foreign Secretary, said from Lusaka that black leaders would not see Sir Geoffrey because they considered him "the emissary of Mrs Thatcher." Mr Healey argued that the Commonwealth leaders must back "really meaningful sanctions."

Cossiga starts talks to resolve Rome crisis

BY JAMES BUXTON IN ROME

PRESIDENT Francesco Cossiga, the Italian leader, today began his consultations with political leaders aimed at resolving the government crisis which broke out last Friday when Mr Bettino Craxi, the Socialist Prime Minister, submitted his resignation.

The Socialist Party, the second largest in the five-party, centre-left coalition after the Christian Democrats, made clear over the weekend that it intends to fight for a return to power by Mr Craxi.

The Socialists are likely to insist that Mr Craxi's position in a new government is reinforced by a sweeping Cabinet reshuffle and that his coalition partners, the Christian Democrats, impose no limit on how long he stays in office.

The Christian Democrat leadership does not appear to be averse to Mr Craxi staying in office, but only on a strictly temporary basis. They would insist that he undertake to hand over office to a Christian Democrat prime minister towards the end of this year, and to emphasise the temporary nature of the arrangement, would insist that the composition of his Cabinet remained much the same as it is now.

The difference between the two parties was aggravated at the weekend by a continuing exchange of accusations over who was responsible for the Government's defeat in parliament on Thursday night.

The coalition was beaten by 27 votes on a local government finance bill in a secret ballot, only minutes after winning by a margin of 108 a

vote of confidence held by a roll call vote.

The Christian Democrats strenuously deny that their own, frequently undisciplined, members of parliament were among the 21 or so Democrats who switched sides between votes. The Christian Democrat party newspaper, Il Popolo, accused the Socialists of practising "enthusiasm" by voting against their Government.

According to this theory, many Socialist members, whose total strength is 73, cast their votes against the Government, adding to the number of dissenters from other parties, in order to create the conditions for Mr Craxi to resign and then insist on being given more

Ministers to boost Eureka with 50 more development projects

BY GUY DE JONQUIERES IN LONDON

EUREKA, the European programme of industrial collaboration in high-technology, is due to receive fresh impetus at a meeting in London today of about 40 ministers from the 18 countries involved in it.

The ministers are expected to approve about a further 50 joint development projects involving companies from different European countries, in addition to the 28 already agreed. They also plan to establish a permanent Eureka secretariat and decide on a site for it.

Today's meeting, which will be chaired by Mr Paul Channon, Britain's Trade and Industry Secretary, comes just over a year after the French Government first suggested Eureka as a European response President Ronald Reagan's Strategic Defence Initiative Star Wars.

Initially proposed as a scheme for collaboration in defence technology, Eureka has since evolved into a programme for encouraging joint development of commercial products and services with clearly-defined market applications, particularly in the area of information technology.

has no funds of its own, many companies taking part in it are receiving support from their national governments.

Projects approved since the last Eureka ministerial meeting in Hannover, West Germany, in November include joint work by companies from two or more European countries on advanced microchip technology, robots, computer software, medical diagnostic equipment and leather treatment techniques.

Full details of the 50 projects due to be approved today have not been set out, but a total of 20 British are involved in about 10 projects. According to Mr Geoffrey Technology, the Department of Industry (DTI), the UK expects to provide £76.6m a year in support of the projects.

Support for Innovation and will cover up to 50% of the cost of their development.

expected to keep subsidies below the high levels previously planned. The ministers are expected to decide to set up a small Eureka secretariat with about a dozen staff. It will be based either in Brussels or Strasbourg, with the former the favoured candidate.

The meeting will also discuss how to respond to approaches from countries including Iceland and Yugoslavia which have expressed interest in joining Eureka. Some participating governments, including the UK, do not want to enlarge the programme's membership until it has developed further.

One politically sensitive issue, likely to remain in the background today, is whether companies operating in Europe but with headquarters elsewhere should be allowed to take part in Eureka projects.

Mr Pettie said last week that he believed such companies should be admitted only if they could contribute unique expertise. "We are not setting up this programme with a view to stimulating the technological development of companies whose beneficial ownership lies elsewhere," he said.

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OVERSEAS NEWS

Egyptians bank on US for help on debt

BY TONY WALKER IN CAIRO

EGYPT and the US are wrestling with a serious debt service problem that if left unresolved could sour relations between the two countries. Egypt faces increasing difficulties meeting its commitments on its foreign debt, said by some international authorities to exceed \$35bn (£23bn).

A clutch of Egypt's senior ministers, including a deputy prime minister and minister of finance, was in Washington last week talking to Reagan Administration officials about the debt problem. They secured a US promise to free \$110m in aid linked to economic reform, but no decisions on additional help.

Their visit followed directly one by Field Marshal Abdel Halim Abu Ghazala, Egypt's Defence Minister, who urged the US to find a solution to his country's military debt burden which is rapidly becoming unmanageable, except at the expense of its other commitments.

At a time of extreme pressures on the US budget deficit, there is little scope for Washington to help outside the present military and civil aid appropriation to Egypt which amounts to about \$2bn annually. Egypt's debt service commitment to the US in calendar year 1986 is \$952m. This covers both military and civil debt and represents about 25 per cent of international repayment obligations, which, according to official Egyptian figures, total about \$3.25bn a year.

A mandatory congressional requirement cutting off aid if a country falls more than 12 months behind on its repayments under the foreign military sales (FMS) programme is adding to pressure on the two sides to resolve the problem. Egypt is persistently one year in arrears on its military debt to the US.

Washington's dilemma is that Egypt is only one among some 40 countries receiving military assistance, although with Israel it accounts for more than half of the \$21.4bn disbursed under the FMS programme. At the end of December 1985 Egypt had received \$4.3bn compared with Israel's \$8.7bn. Other major recipients include

EGYPTIAN DEBT (\$m)		
Category	Loans outstanding	Debt service
Soft loans	2,513	57.4
Food import assistance	2,159	42.7
Commodity		
Credit Corp.	61	12.9
Edimbank	173	43.5
Foreign		
military debt	4,253	542.5
Others	625	84.1
Total	9,894	795.2

Source: US Economic Trends

Turkey \$1.9bn. Spain \$1.6bn and Greece \$1.4bn.

Ypinus options to assist Egypt have been studied by US officials, including providing interest rate relief, but there are technical barriers to such a course. FMS assistance is provided through the US Federal Financing Bank at commercial interest rates on the date the credit is drawn.

US officials worry that if it provided Egypt with interest rate relief, demands from other debtors for similar treatment would flood in. There is also the domestic problem of the huge US farm debt totalling some \$150bn.

"That constitutes a real political problem," said a US official. "Can you imagine what lowering interest rates to farmers would do to the budget?"

Part of Egypt's difficulty is that it borrowed at very high rates of interest prevailing

between 1979-1984. The average interest rate on Egypt's military debt is 12.01 per cent—well above existing rates which are around 8 per cent.

The bleak prospect for Egypt is that the military debt peak is still some way off. Repayment of principal and interest on FMS assistance rises from \$543.5m this year to \$704m in 1994 before beginning a slow decline.

US officials recognise that Egypt's financial circumstances are such that unless debt relief is forthcoming serious political problems may arise.

The most likely way around the problem is for more of the annual aid appropriation be converted to cash assistance which would allow Egypt meet its commitments. Such a move, however, would squeeze funds available for investment and commodity support. As a US official said: "There are no easy solutions."

Iraq bombs Iranian villages

Iran said Iraqi warplanes yesterday bombed two villages, killing five civilians and wounding 28, after Iraq warned of a new "war of cities" over Iranian missile strikes against its northern oil town of Kirkuk, Reuter reports from Bahrain.

Tehran Radio said bombs hit Saadi and Abadi villages, 37 miles east of the southern Gulf war front, and near the town of Shadegan. Victims included women and children.

The bombings followed reports of Iranian air strikes on two tankers on Saturday inside the 12-mile territorial limit of the United Arab Emirates (UAE), in what appeared to be Tehran's closest inshore raid so far on the Arab side of the Gulf.

There was no immediate comment from the UAE authorities on the attacks in Dubai anchorage, previously regarded as safe.

Iraqi regime and... will the Shadegan area a number of times in recent months, but yesterday's raid followed fresh Iranian declarations it would retaliate for raids on civilian targets.

"The heroic Moslem forces of Iran will strongly respond to any criminal act by the Iraqi regime and... will powerfully defend the civilians," the Iranian News Agency IRNA quoted a war spokesman as saying.

Rothschild supports Israel bank chief in fight to keep job

BY ANDREW WHITLEY IN TEL AVIV

BARON Edmund de Rothschild, head of the French branch of the Rothschild family, has made an unexpected intervention in the acrimonious dispute between the Israeli authorities and the country's top bankers.

The bankers are accused of acting as a cabal manipulating the local stock market over a period of years to the advantage of their institutions and themselves. The subsequent crash of the stock market, in October 1984, has had far-reaching consequences.

In a telegram to Prime Minister Shimon Peres last week, Baron Rothschild, whose family played a prominent role in the founding of the state of Israel, attacked the conclusions of the government-appointed Bejsky inquiry into the bank share scandal. "I am disturbed and shocked by the fact that a temporary commission substituted itself for the permanent judicial authorities of the country," he said.

The Commission's findings and recommendations, reported in the official gazette, were published in April. Since then the heads of Bank Leumi, Israel Bank, Hapoalim and United Mizrahi Bank have already said it is to bring criminal charges against Mr down. But Mr Raphael Recanati, chairman of Israel Discount Bank, the IDB, is defiantly refusing to resign.

Backing Mr Recanati, the baron warns that his removal by an external body "would permit great abuse, affect negatively the image of Israel and make foreign investment in Israel even more difficult."

Baron Rothschild defends two other former pillars of Israeli banking: Mr Ernest Japhet and Mr Abraham Meir, who have both resigned amid bitter protests, after being strongly criticised by the Bejsky Commission.

Last week Professor Michael Bruno, the newly appointed Governor of the Bank of Israel, met Mr Recanati and the IDB board in an attempt to persuade him that he had to go.

He was apparently unsuccessful and the Government is under pressure to pass fresh legislation to strengthen the central bank's chief in enforcing Judge Moshe Bejsky's proposals.

The year-long inquiry did not specifically urge criminal proceedings but it reported detailed and persistent breaching of banking and stock market regulations by the banks and their chief executives. The Justice Ministry has already said it is to bring criminal charges against Mr Meir, the former head of Mizrahi.

Japanese socialists battle to unseat Nakasone

WHEN JAPANESE voters go to the polls next Sunday, most of them will vote for the Liberal Democratic Party just as they have done for the past 30 years, writes Carla Rapoport from Tokyo. The number of seats the LDP wins however will determine whether Prime Minister Yasuhiro Nakasone stays on for another term or loses his job to a party rival.

Mr Nakasone himself is a focus for the campaign by Japan's opposition parties, led by the Japan Socialist Party with more than 20 per cent of seats in the House of Representatives.

The Socialists admit that toppling the LDP in this election is out of the question, but

they remain committed to electing a socialist prime minister within the next decade.

Mr Misashi Ishibashi, 82, the JSP chairman, described Mr Nakasone as "militaristic, a liar and no good for Japan," in a speech at the weekend.

He accused Mr Nakasone of sacrificing spending on welfare

benefits, education, pensions and local government in favour of increased military spending.

In recent months, the JSP has toned down its party platform by eliminating all Marxist rhetoric. Officially, however, the JSP is still committed to "unarmed neutrality" and to ignoring the existence of South Korea. Nonetheless, the new

platform may allow the socialists to form a coalition of some sort with one of the other five opposition parties, or perhaps a faction of the LDP.

"The JSP currently has 110 of the 511 lower house seats. Mr Ishibashi says that 120 seats this time will be a victory. It takes a long time to become number one in Japan."



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Cabinet postpones decision on Shin Bet inquiry

BY LYNNE RICHARDSON IN TEL AVIV

THE Israeli cabinet averted a looming crisis yesterday over whether to initiate an inquiry into Shin Bet, the internal security service, by deciding to postpone any decision.

Resignation threats by three left-leaning cabinet ministers and four non-cabinet ministers were signs of vociferous opposition to the deal worked out last week by the inner cabinet, whereby Mr Avraham Shalom, the head of the Shin Bet, was to resign and be granted an automatic presidential pardon. Three of his top aides, who retain their posts, were also pardoned.

Last week's deal was an alternative to holding an inquiry into the alleged cover-up and consequent framing of a top army officer, during previous investigations into the beating to death of two Palestinian bus hijackers in April 1984.

However, the emphasis of the argument for and against the probe has now become more political, with the resignation threats of the three left-leaning ministers seen by their coalition partners on the right as a blatant ploy to force elections.

A poll would stop the agreed plan for Mr Yitzhak Shamir, of the Likud, to take over the premiership from Labour's Mr Shimon Peres in October.

Having achieved success both in stabilising the economy and bringing most of the Israeli soldiers out of Lebanon, Prime Minister Peres is riding high in the polls but he has ignored frequent calls from some members of his party to dissolve the cabinet and force elections.

The right is prepared to fight any election engineered by the Board of Directors. The government, as Mr Ehud Olmert, of the Likud, indicated yesterday, warning Labour about its political "gamesmanship," he said: "They had better watch it because they might regret it."

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OVERSEAS NEWS

Pretoria allows Buthelezi to hold Soweto rally

BY ANTHONY ROBINSON IN JOHANNESBURG

THE South African Government yesterday permitted Chief Mangosuthu Buthelezi, leader of 6m Zulus, to hold a political rally...



Mr P. W. Botha—called upon to release Mandela

It was the first time that Chief Buthelezi has addressed a major political rally outside his Kwazulu/Natal power base since November 1984.

He used the occasion both to condemn black on black violence and highlight the potential importance of the government's offer to create a National Statutory Council...

Later unconfirmed reports from Soweto said five migrant hostel workers were killed after a running battle between Zulu Inkatha supporters and those of other tribes...

Chief Buthelezi arrived at the stadium by helicopter while several thousand of the estimated 15-18,000 Zulus present were bused to Soweto.

It is not permitted under the media restrictions of the state of emergency to describe the security arrangements provided by the South African and Zulu police.

Indian GDP forecast to grow at 4% annually

BY ALAIN CASS, ASIA EDITOR

OPPOSITION TO economic reform, shortage of domestic and international finance and lack of adequate infrastructure will hamper growth of the Indian economy...

The report by the Economist Intelligence Unit, forecasts that the Indian gross domestic product will grow at 4 per cent a year over the next five years...

The report says strong vested interests in preserving trade barriers and latent nationalism will act as a break on change in areas such as foreign investment and trade.

It forecasts that industrial output will grow by 8 per cent a year, against the 6.3 per cent envisaged by the Government.

Infrastructure will rise by 8 per cent, against the plan's more optimistic 12 per cent; and the rate of growth in the agricultural sector will also be lower than the official forecast.

The Indian Prime Minister Rajiv Gandhi's problems in maintaining the impetus of reform will be complicated, according to the report...

In the long term, however, the report says that, while the targets of the current Five Year Plan are optimistic, the longer term aim for economic development are attainable.

Brandt warns of Peruvian coup danger

BY HUGH CARNEY IN DUBLIN

FORMER West German Chancellor Willy Brandt, who returned from a visit to Peru last week, has warned that there is an imminent danger of a coup there...

Mr Brandt, the chairman of the Socialist International, told a meeting of the West German Social Democrats (SPD) executive in Munich that left-wing guerrilla violence was helping pave the way for a takeover by forces opposed to Peruvian President Alan Garcia's moves towards democracy and social reform.

Mr Brandt, who is also chairman of the SPD, was in Lima for a meeting of the Socialist International, which took place amid bloody prison riots by left-wing Sendero Luminoso (Shining Path) guerrillas...

Leftist guerrillas bombed a police station and three offices of the ruling party overnight at the weekend, police said, as President Garcia accused the Republican Guard of executing over 100 Sendero inmates during the prison riots.

Soviet writers replace leaders

In an apparent shift towards more liberal attitudes in literature in the Soviet Union, the Soviet Writers' Union has replaced its leaders of the last decade...

Mr Georgy Markov, aged 75, was succeeded as first secretary of the union by Mr Vladimir Karpov, the editor of the magazine Novy Mir...

Mr Markov was given the ceremonial post of chairman of the union. The change is important because the writers' union, with a membership of 10,000, largely determines what works are published in the Soviet Union...

After rejecting the arguments of those who claim that violence is the only way forward, Mr Buthelezi added that "blacks now have the bargaining power which will ensure that negotiations will succeed."

Italian trade fillip

Italy's trade deficit was halved in the first five months of this year, writes Alan Friedman in Milan. Provisional figures released yesterday show that the deficit for the five months ending May 31 came down to L1,823bn (\$2.1bn) against L4,516bn in the first five months of 1985...

Ten die in Sri Lanka

At least 10 people were killed at the weekend in separate clashes between troops and Tamil guerrillas in Sri Lanka in spite of a peace plan offered by President Jantana Jayawardene...

French boat seized

Spanish coastguards seized a French boat yesterday fishing off the Basque coast, maritime officials said. Reuter reports from San Sebastian...

Haughey predicts early election

BY HUGH CARNEY IN DUBLIN

MR CHARLES HAUGHEY, leader of the Irish opposition Fianna Fail Party, yesterday stepped up his attack on Dr Garret FitzGerald, the Prime Minister and his Fine Gael-Labour coalition...

The political situation is much more unstable now than it was before the referendum with the Government's authority and particularly the Taoiseach's (Prime Minister's) authority very seriously undermined...

He predicted an early general election and pressed his attack by criticising the Government for not taking advantage of favourable international conditions to boost the still-faltering economy.

The Government's term officially runs until November 1987, but a number of politicians are predicting an election as early as this autumn. Parliament rises this week for the summer recess, so the Government, already in a parliamentary minority, seems safe until then.

Dr FitzGerald's position as leader is not under immediate threat but bitter post-mortems have begun on how a 20-point lead at the start of the referendum campaign turned into a rout in which the divorce proposal was defeated by 68.5 per cent to 31.5 per cent.

estimated the potency of the opposition mounted by the Roman Catholic Church and its supporters.

Mr Haughey, already well ahead in the opinion polls, has emerged the main beneficiary of the referendum having avoided officially committing himself or his party to the issue.

The opposition leader has refused to accept that the vote would make "one iota" of difference in Northern Ireland, dismissing concerns expressed by Dr FitzGerald and Mr John Hume, leader of the north's Social Democratic and Labour Party...

Both the Irish and British Governments have insisted the divorce vote. But, at the least, Dublin's position as champion of minority rights in the north has been undercut by a clear denial of minority rights in the south.

Call for national unity as Yugoslav inflation soars

BY WILLIAM DULLFORCE IN ZURICH

YUGOSLAVIA'S Communist Party leaders have been charged with unifying an increasingly fragmented nation faced with soaring inflation, and a \$20bn (£18.5bn) debt, Reuter reports from Belgrade.

The 185-seat central committee of the Yugoslav party chose a substantially new leadership at the weekend, with only six members keeping their seats in the 23-seat party presidency.

The new party president, Mr Milenko Renovic, from the republic of Bosnia-Herzegovina, called for greater cohesion and a crackdown on nationalism and separatism.

Officials said the party's congress, which ended on Saturday, had seen some of the fiercest criticism in the history of the communist movement. But many congress delegates complained openly that it stopped short of calling to account those responsible for Yugoslavia's economic troubles.

Secret elections to the central committee brought in 50 already established politicians but several new and younger faces as well.

Aleksandar Lebl adds from Belgrade: "If the previous failures to implement decisions adopted by congress are repeated, the four-day meeting may turn out to be less of a turning point than many speakers said."

Observers in Belgrade feel time is running out for the Yugoslav economy and that, if stagnation continues, the country will face grave dangers. The diner depreciated last week. It fell by about 30 per cent against the dollar, and is likely to continue its decline this week.

Meanwhile the commercial banks decided to reduce interest rates for deposits of three to 12 months from 73 to 42 per cent on July 1.

With annual inflation at over 80 per cent this means that instead of a positive real interest rate depositors will get a negative rate of some 40 per cent in real terms.

G5 criticised over exchange rate failures

BY WILLIAM DULLFORCE IN ZURICH

THE VOLATILITY of currency rates has been heightened rather than reduced since the Group of Five finance ministers and central bankers acted last September to reduce the value of the dollar.

This increased volatility has been engendered at least partly by unco-ordinated official statements, the failure of the leading industrialised countries to agree on sustainable exchange rates and ad hoc market interventions by monetary authorities...

A more stable exchange rate system calls for clear policy co-ordination by the industrial nations and regular, public identification of what they regard as sustainable rates, the group suggests.

The "shadow group of seven" has been formed in New York to co-ordinate their economic policies and to devise a set of economic indicators to help them do so.

The New York private group warns that on-again, off-again official concern about exchange rates would be ineffective. Co-ordination would require officials to meet regularly to review economic policies.

Austrian N-protestors turned back by Bavaria

By Peter Bruce in Bonn

BAVARIAN state authorities have sparked off a chain of political rows by closing West German borders to hundreds of Austrians wanting to travel to a rally in Regensburg on Saturday to protest against the building of a nuclear reprocessing plant in Wackersdorf.

Mr Peter Jankowitsch, the Austrian Foreign Minister, called the move "anachronistic" and a "return to the times of closed borders." The Bavarian Free Democrat Party (FDP) has also sharply attacked the Bavarian Christian Social (CSU) Government for turning back the Austrians.

Organisers of the Regensburg rally said only four Austrians managed to take part in it. More than 3,000 Austrian doctors and nurses had been expected. Bavarian border police said they had turned back only 322 people.

The frontier action is likely to add to the suspicion that Bavaria, under the leadership of Mr Franz Josef Strauss, is prepared to ignore the more delicate wishes of the Bonn Government and to act unilaterally in defending the Wackersdorf project.

Vienna has also hinted that it is unhappy at the thought of another nuclear facility being built near Austria, but the Bonn government has tried to treat the matter lightly.

The mounting violence at anti-nuclear protests, and the likelihood that it will get worse, was made stark on Saturday when police in Bavaria say they defused 40 kilogrammes of explosive found packed around two high tension electricity pylons near the Garmisch nuclear power plant north west of Munich.

An anti-nuclear group claimed responsibility.

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WORLD TRADE NEWS

Canada unveils plans to boost drug patents

BY BERNARD SIMON IN TORONTO

THE Canadian Government has unveiled long-awaited and controversial proposals to tighten patent protection on prescription medicines.

The proposals, in a draft bill to be introduced after the summer break, will significantly weaken the contentious compulsory licensing rules in force in Canada for the past 17 years.

These rules aim to bring down local medicine prices by requiring multi-national pharmaceutical companies to license so-called "copy-cat" or generic products long before their patent expires. About 125 generic drugs are now on the market.

The compulsory licensing policy has been a big source of friction in commercial relations between Canada and the US and EEC. Besides complaints of inadequate patent protection, brand-name drug manufacturers have complained that low-cost generic drugs made in Canada have been exported to Africa and the Middle East.

If the bill is passed, patent holders' exclusive rights will be extended to between seven and 10 years. Drugs totally developed in Canada will be given full 17 year patent protection. Multi-nationals have recently been required to license local generic manu-

facturers within three or four years of launching new products.

In return for greater patent protection, brand name companies have agreed to increase their research and development spending in Canada from 5 per cent of sales to 8 per cent in 1990, and 10 per cent in 1995.

A Drug Price Review Board will be set up to monitor prescription drug prices. The Government hopes these safeguards will placate vociferous domestic critics of the proposed system, who fear that greater patent protection for multi-national pharmaceutical companies will significantly raise local medicine prices.

● The US International Trade Commission has held in a preliminary decision that Canadian softwood lumber imports are injuring US lumber producers. AP reports from Washington. The ruling could lead to stiff duties on future Canadian imports. The decision was a victory for a US industry which is seeking duties of up to 27 per cent on Canadian imports.

Cairo seeks extension on nuclear plant bids

By Tony Walker in Cairo

Egypt has asked international consortia-bidding for a much-delayed \$1bn nuclear power plant project to extend their bids until December 25.

This is the second extension requested this year and indicates Egypt is still some way from making a decision. Companies were asked in February to re-submit bids by the end of June in what amounted to a last chance to improve their offers for the \$1.25bn project on the Mediterranean coast, west of Alexandria.

At least one of the three bidders, Kraftwerk Union of West Germany, has told Egypt it is prepared to extend its financing proposal, subject to the approval of West Germany's Hermes credit agency.

The other bidders, Westinghouse of the US and Framatome of France, which is heading an Anglo-French consortium are expected to follow suit. Egypt's explanation for the latest delay is that it is awaiting a report from the International Atomic Energy Agency on the Chernobyl disaster. Egypt's financial difficulties have, in any case, put the el Dabba project in doubt.

Oil price hits Soviet earnings

BY PATRICK COCKBURN IN MOSCOW

THE DROP in the value of Soviet oil exports led to a sharp decline in hard currency earnings in the first quarter of the year, according to official figures.

The fall in oil exports to 3.2bn roubles (£2.9bn), 5 per cent down on the same period last year, is worse than it looks because the severe winter depressed earnings in early 1985.

Imports during the first quarter, down 12.5 per cent to 4.4bn roubles, means a trade deficit of 1.2bn roubles. Many Western exporters to the Soviet Union have seen regular orders cut back and expected contracts for big projects cancelled or postponed.

About 60 per cent of the

Soviet Union's hard currency earnings come from the sale of crude oil. The country's ability to import is being hit by the drop in other fuel and raw materials prices and the weakness in the dollar, in which most Soviet exports are denominated.

This is likely to put a severe constraint on Soviet imports from the West. The Soviet foreign trade account recorded a surplus of \$3.2bn in 1984 but a deficit of \$1.7bn in 1985. Borrowings last year were \$1.5bn.

Western businessmen in Moscow are waiting to see the fate of big projects in the current five year plan, which was finally passed last week by the Supreme Soviet. Despite many

cancellations or delays, companies which have built plant in the USSR before hope to receive contracts to refurbish or expand the production capacity of equipment already installed.

At the same time the new five year plan (1986-90) calls for heavy investment in electronics, machine tools and the oil and gas industries. Mr Nikolai Ryzhov, the Soviet Prime Minister, told the Supreme Soviet last week that only 14 per cent of the output of the Ministry of Machine Tool and Tool Making Industry was up to world standard and only 17 per cent of the output of the Ministry of Instrument Making, Automation Equipment and Control Systems.

Asean pressed on trade barriers

BY CHRIS SHERWELL IN MANILA

THE US and the European Community have urged the six countries of the Association of South East Asian Nations (Asean) to lower their substantial protectionist barriers to defect restrictive trade pressures in their overseas markets.

The suggestions came during two days of meetings in Manila last week between Asean, which embraces Indonesia, Thailand, Malaysia, the Philippines, Singapore and Brunei, and their six biggest trading partners—the US, Japan, the EEC, Canada, Australia and New Zealand.

Mr George Shultz, the US Secretary of State, sharply reminded Asean that some of the world's most protectionist practices were used by low-income developing countries. He cited figures showing that Asean exports to the US had

reactions to Asean's long-voiced complaints against them were public and pointed.

Mr Claude Cheysson, representing the European Commission, said there was protectionism on both sides of the EEC-Asean trading relations. It would be "fruitful to consider whether your large market is not, at times, unduly protected," he told the six.

Figures on EEC-Asean trade show the Six's exports to the Community increased only marginally between 1983 and 1985 and have fallen significantly since 1980 from \$9.7bn to \$7.6bn. However, exports to the Six from the EEC, US and Japan—Asean's three biggest trading partners—have all fallen in recent years.

grown by \$2.2bn, from about \$14bn to more than \$16bn, whereas its exports to the rest of the world had declined by \$3.3bn. "I think that tells you where your problem is," he declared.

Figures on EEC-Asean trade show the Six's exports to the Community increased only marginally between 1983 and 1985 and have fallen significantly since 1980 from \$9.7bn to \$7.6bn.

However, exports to the Six from the EEC, US and Japan—Asean's three biggest trading partners—have all fallen in recent years.

Finnish shipbuilder wins FM 1.2 bn Soviet order

BY OLLI VIRTANEN IN HELSINKI

A FINNISH shipping group has won a FM 1.2bn (£153.6m) shipping order from the Soviet Union. The order coincides with talks between Finland and the Soviet Union about the trade imbalance which is now running heavily in Finland's favour.

Rauma-Repola's order for three floating crabs and fish processing vessels is the biggest the company has won. It will keep its yard at Rauma fully employed until 1990.

The deal was signed on Friday to coincide with a visit to Finland by the Soviet Foreign Trade Minister Mr Boris Arlov. He met senior Finnish

officials in a bid to correct the growing trade imbalance. The two agreed to increase Soviet exports to the tune of \$300m a year between 1987 and 1990. The additional imports to Finland will consist of coal, petrochemicals, minerals, food and motor cars, and include 1m tonnes of crude oil a year which the Finnish state oil company, Neste, will trade on international markets.

Under the barter trade agreement the surplus should not exceed FM 2bn either way. Finland, however, will probably run a surplus of FM 4bn by the end of this year.

World Economic Indicators

Country	TRADE STATISTICS				
	May '86	April '86	March '86	May '85	
UK (£bn)	Exports 5,871	Imports 4,838	5,733	6,903	
	Imports 4,537	4,303	4,871	4,531	
	Balance -0.664	-0.265	-0.338	+0.252	
US (\$bn)	Exports 17,965	18,913	17,735	17,973	
	Imports 30,036	33,435	30,225	29,987	
	Balance -12,071	-14,521	-12,490	-11,934	
Japan (\$bn)	Exports 17,737	17,647	15,084	14,871	
	Imports 10,909	10,997	11,156	10,834	
	Balance +6,828	+6,644	+3,928	+4,037	
W. Germany (DM bn)	Exports 45.86	44.85	44.61	44.32	
	Imports 34.72	35.50	36.86	38.56	
	Balance +11.14	+9.35	+7.75	+5.76	
France (FFr bn)	Exports 71.40	69.10	72.87	77.60	
	Imports 74.30	71.70	73.79	81.80	
	Balance -4.90	-2.60	+0.08	-4.20	

SHIPPING REPORT

Tanker market weakens slightly as Opec meets

FINANCIAL TIMES REPORTER

THE tanker market this week was somewhat under the cloud of the meeting in Yugoslavia, of the Organisation of Petroleum Exporting Countries, with oil companies waiting for a somewhat unlikely event of a firm outcome which would move the oil market. But price levels, while a little weaker, are still described as fairly firm.

The bulk carrier market has seen another week of record lows, with the Gulf/Continental (\$2.45m) had its price re-grain rate collapsing to \$4.50.

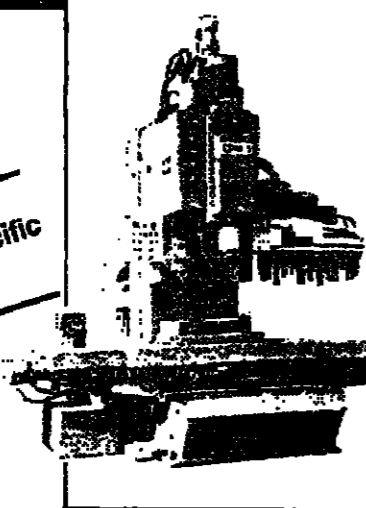
Rates in the Pacific are still stronger, however.

As might be expected, the divergence between the fortunes of the two markets continues to be reflected in the sale and purchase market. One tanker sale reported is a 79,000 tonner, built in 1967, which was expected to be sold for scrap but instead went to Greek buyers for \$2.2m.

In bulk carriers, by contrast, a 65,000 tonner (1978) going to other Greek buyers for \$3.7m (\$2.45m) had its price negotiated to \$3.3m.

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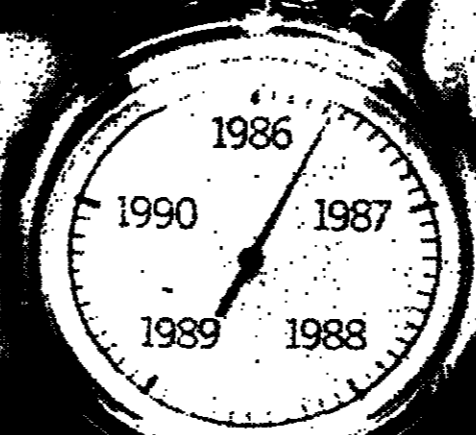
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UK NEWS

Land Rover unveils new forward control vehicle

BY JOHN GRIFFITHS IN LONDON

LAND ROVER is planning to re-enter the market for forward-control utility and all-terrain vehicles, from which it has been absent for eight years.

A fully developed prototype has been unveiled at the British Army Equipment Exhibition, which opened at Aldershot, west of London, this week.

But unlike previous forward control vehicle production, which took place exclusively for the UK Ministry of Defence between 1967 and 1978, Land Rover intends to seek both military and civilian customers for its latest vehicle.

In a forward control vehicle, the driver and controls are placed slightly forward of the engine/transmission unit, which is mounted low down in the chassis close to the front wheels.

The company would give no forecasts of potential production or sales. A version suitable for civilian applications is expected to be available for sale in about a year. However, the first orders for military versions may be announced much sooner.

Land Rover sees the two-tonne payload vehicle as filling a variety of military roles such as communi-

cation unit, personnel carrier or weapons platform.

Civilian applications, it suggests, could include airport fire-tenders, cross-country ambulances, break-down trucks and mobile workshops for public utilities. As with the military versions, the variations could be met by building a variety of bodies on the basic Land Rover chassis cab.

Investment in the vehicle, which has been under development for the past two years, is described by the company as low, because it uses mainly existing Land Rover components.

The notable exception is the cab, which is of plastic composite panels bonded to a tubular steel and aluminium frame, and which has been produced by Motor Panels (Coventry), the specialist vehicle design and production company also responsible for developing the Cab range for Leyland Trucks.

Land Rover is refusing to comment on potential market size for the new vehicle, which will come in aluminium pick-up and dropside body versions as well as chassis cab units.

SIB plans to protect investors' money prompt wide hostility

STOCKBROKERS have been mounting a strong lobby against the draft rules of the Securities and Investments Board (SIB) which aim to protect the money of investment clients by ensuring it is segregated from the funds of investment firms.

The client money proposals of SIB, the nascent investor protection agency set up under the provisions of the Financial Services Bill, have become among the most controversial of all its draft rules. Comments on the proposals, which have to be submitted by today, indicate hostility from a wide range of industries.

The proposals would require all authorised investment firms to keep their clients' money in trust accounts separated from their own money and to ensure that it is withdrawn only in response to instructions from the clients.

If effective, such segregation would protect clients' money even if the firm becomes insolvent. In most of the investment scandals over the last five years, clients' money has been mingled with the funds of the investment firm.

The stock exchange has argued, however, that the SIB proposals will do nothing to protect clients against fraudsters. They will still have access to their clients' segregated accounts and be able to use their money for illegitimate purposes.

The banks, in their comments on the draft rules, have asked SIB to

be granted immunity so that they should not be held responsible if money is removed improperly from a trust account in one of their branches. SIB is resisting this request.

However, the stock exchange believes that in most cases where an investor finds his money improperly removed from a trust account the law will grant him no redress against anyone except the investment firm.

It argues that the best form of protection for clients, when a stockbroker becomes insolvent, is through its compensation fund. This has ensured that no stock exchange investor has ever lost money through the insolvency of a member firm over the last 30 years although they may have had to wait for up to three months to retrieve their money.

The draft rules will impose an intolerable administrative burden on its members, the stock exchange says. Segregated accounts might be suitable for solicitors and estate agents, where a client's money is used typically for only one large transaction, or for commodity bro-

kers, who require cash settlements infrequently.

But stockbrokers and dealers in securities have to make a large number of complex transactions which require the transfer of client money.

Shares that have been bought by their clients have to be paid for at the end of the two-week account period. Money has to be transferred when clients subscribe for rights issues and meet calls. At the same time, money is being received continually on behalf of clients from the sale of shares and the payment of dividends.

At present clients who buy shares often fail to pay their stockbrokers by the end of the account period. In these situations the payment is usually made out of the general pool of money belonging to both clients and the firm.

If each client has a separate account, one likely consequence, say some brokers, is that they will be much stricter in insisting that the investor has adequate funds in his account before he buys shares.

Stockbrokers acknowledge that computerisation should alleviate the administrative burden of disentangling the ebb and flow of money into client accounts.

The draft rules would give a competitive advantage to the brokers that are subsidiaries of the clearing banks which have easy access to computerised account systems.

Dixons' Woolworth bid reaches lobbying climax

BY CHARLES BATCHELOR IN LONDON

DIXONS, the electrical retailing group, and Woolworth Holdings, the target of its £1.8bn takeover bid, today begin the final three days of intense lobbying of Woolworth shareholders to win them to their respective causes.

Over the weekend the argument between the two sides centred on the degree of institutional support for the Dixons bid, which closes at 1pm on Wednesday after a hard-fought 12-week campaign.

S. G. Warburg, which is advising Dixons, said the bid had broad support from other institutions and not just from Mercury Warburg Investment Management, which has said it will vote its 13.5 per cent holding

in Dixons' favour.

Woolworth countered that Dixons was attempting to confuse the issue and said it believed that Dixons' backing came largely, if not exclusively, from Mercury Warburg.

Although it is unusual for institutions to declare their hand before the closing minutes of a takeover bid, Woolworth has already had promises of support from Robert Fleming Investment Management, which has about 10 per cent, and Charterhouse Group, which has 3.1 per cent.

Dixons shares were 336p at Friday's stock market close.

Mea and Matters, Page 16

THIS NOTICE DOES NOT CONSTITUTE AN OFFER FOR SALE AND THE STOCKS LISTED BELOW ARE NOT AVAILABLE FOR PURCHASE DIRECT FROM THE BANK OF ENGLAND. OFFICIAL DEALINGS IN THE STOCKS ON THE STOCK EXCHANGE ARE EXPECTED TO COMMENCE ON MONDAY, 30TH JUNE 1986.

ISSUES OF GOVERNMENT STOCK

The Bank of England announces that Her Majesty's Treasury has created on 27th June 1986, and has issued to the Bank, additional amounts as indicated of each of the Stocks listed below:

£150 million	10 per cent TREASURY STOCK, 1992
£150 million	8 1/2 per cent TREASURY LOAN, 1987
£150 million	9 1/2 per cent CONVERSION STOCK, 2004

The price paid by the Bank on issue was in each case the middle market closing price of the relevant Stock on 27th June 1986 as certified by the Government Broker.

In each case, the amount issued on 27th June 1986 represents a further tranche of the relevant Stock, ranking in all respects pari passu with that Stock and subject to the terms and conditions applicable to that Stock, and subject also to the provisions contained in the final paragraph of this notice; the current provisions for Capital Gains Tax are described below.

Copies of the prospectuses for 10 per cent Treasury Stock, 1992 dated 11th November 1977, 8 1/2 per cent Treasury Loan, 1987 dated 7th July 1977 and 10 per cent Treasury Convertible Stock, 1990 dated 13th January 1984 (which contained the terms of issue of 9 1/2 per cent Conversion Stock, 2004) may be obtained at the Bank of England, New Issues, Westing Street, London, EC4M 3AA.

Application has been made to the Council of The Stock Exchange for each further tranche of stock to be admitted to the Official List.

The Stocks are repayable at par, and interest is payable half-yearly, on the dates shown below:

Stock	Redemption date	Interest payment dates
10 per cent Treasury Stock, 1992	21st February 1992	21st February 21st August
8 1/2 per cent Treasury Loan, 1987	1st September 1987	1st March 1st September
9 1/2 per cent Conversion Stock, 2004	25th October 2004	25th April 25th October

Each further tranche of stock will rank for a full six months' interest on the next interest payment date applicable to the relevant Stock.

Each of the Stocks referred to in this notice is specified under paragraph 1 of Schedule 2 to the Capital Gains Tax Act 1979 as a gilt-edged security under current legislation exempt from tax on capital gains on disposals made on or after 2nd July 1986, irrespective of the period for which the Stock is held.

Government statement

Attention is drawn to the statement issued by Her Majesty's Treasury on 29th May 1985 which explained that, in the interest of the orderly conduct of fiscal policy, neither Her Majesty's Government nor the Bank of England or their respective servants or agents undertake to disclose tax changes decided on but not yet announced, even where they may specifically affect the terms on which, or the conditions under which, these further tranches of stock are issued or sold by or on behalf of the Government or the Bank; that no responsibility can therefore be accepted for any omission to make such disclosure, and that such omission shall neither render any transaction liable to be set aside nor give rise to any claim for compensation.

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To the Holders of

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NOTICE IS HEREBY GIVEN to the holders of the outstanding 6 1/2% Convertible Debentures Due 1995 (the "Debentures") of Ricoh Company, Ltd. (the "Company") that pursuant to the provisions of Article Four of the Indenture dated as of August 1, 1980 between the Company and Morgan Guaranty Trust Company of New York (the "Trustee"), the Company has elected to redeem on July 31, 1986 all of its outstanding Debentures at 103.875% of the principal amount thereof together with accrued interest of \$22,000 for each \$1,000 principal amount. Interest on the Debentures shall cease to accrue on and after July 31, 1986.

Payments will be made on and after July 31, 1986 against presentation and surrender of Coupon Debentures with Coupons due September 30, 1986 and subsequent coupons attached, subject to applicable laws and regulations either (a) at the office of the Trustee in New York City, or (b) at the London, England offices of The Mitsubishi Bank, Limited at 7 Birchin Lane, London, EC3. The Fuji Bank, Limited at 25 31 Moorgate, London, EC2R 6HQ, and The Tokai Bank, Limited at P & O Building Leadenhall Street, London, EC3V 4HD. Payment at the offices referred to in (b) above shall be made by check drawn on, or transfer to a United States dollar account maintained by the payee with a bank in New York City. Registered Debentures should be presented and surrendered for payment by forwarding them to the Trustee at 30 West Broadway, 13th Floor, New York, New York 10015, Attention: Corporate Trust Department. The method of delivery of the Debentures is at the option and risk of the holder, but if mail is used, Registered Mail is suggested.

Holders have the right to convert their Debentures into shares of Common Stock of the Company, or at the option of the holders into American Depositary shares at the conversion price (with the Debentures taken at their principal amount translated into Japanese Yen at the rate of Yen 227.25 equalling \$1.00) of 507.7 Yen per share. Each holder who wishes to convert his Debentures must deposit his Debentures (in the case of Coupon Debentures with all unexpired Coupons attached) accompanied by a written notice to the effect that the holder elects to convert such Debenture with the Depository and Conversion Agent, Chemical Bank, Corporate Trust Office, 55 Water Street, New York, New York 10031 or at any of the offices of the Depository's Agents in London, The Mitsubishi Bank, Limited, The Fuji Bank, Limited and The Tokai Bank, Limited. The Indenture provides that the right to convert the Debentures will terminate at the close of business (3:00 P.M. Local Time) on July 29, 1986.

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Dated: June 25, 1986

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UK NEWS

Labour pledge on health services

By Peter Riddell, Political Editor

A LABOUR GOVERNMENT would increase spending on health services by up to £500m a year, Mr Michael Meacher, the Labour's spokesman on social services, said yesterday.

On TV-AM's "Jonathan Dimbleby on Sunday programme", Mr Meacher said Labour would increase health spending in real terms by 3 per cent a year. "What the Tories have done for health services, we will do for the health services," he said.

There would be "a positive increase in spending on health services of up to half a billion pounds a year".

Mr Meacher went on to argue that even taking account of both the faster increase in medical costs than retail prices generally and the rising number of elderly people, there would still be "a considerable amount left over for extra expenditure on services."

Later in the same programme Mr Norman Fowler, the Social Services Secretary, said Mr Meacher's pledge was very similar to what the Tories had been doing since 1979 in terms of overall spending.

Mr Fowler said he hoped that over the next few months the Government would be doing a number of things aimed at reducing not just waiting lists but waiting time as well.

Chemical output rises 4.4%

By Tony Jackson

OUTPUT by the UK chemical industry rose 4.4 per cent last year, outstripping the 3.1 per cent rise in manufacturing industry as a whole. The increase also outpaced the rise in worldwide output of chemicals of 3.5 per cent.

However, the rise was concentrated in the first half of the year, with output falling in the second half, according to Government figures. The downward trend has continued this year, with first quarter output 4.1 per cent lower than in the corresponding period last year.

Institute of Directors urges 30% reduction in public spending

BY MICHAEL PROWSE

PUBLIC SPENDING should be cut by nearly 30 per cent over the next decade, says the Institute of Directors in a report out today. It says the objective of expenditure cuts totalling nearly £50bn in today's prices would be to turn Britain into a tax haven.

The cuts in public spending, which would involve a progressive run-down of state health and education services, would finance the abolition of all taxes on capital and the introduction of a uniform 10 per cent rate of income, corporation and value added tax.

Big reductions in taxation are both possible and desirable, says the institute, because "most of the

functions of government are ultimately dispensable and would be performed more efficiently and economically in the private sector."

One of the principles underlying its programme for tax reduction is called the "unimportance of equality."

The institute says the state should protect people from absolute poverty but should not use the tax system as a tool to reduce income and wealth inequalities. It thus favours the abolition of higher rates of income tax.

The institute opposes most of the tax reform proposals put forward by other groups. For example, it regards the "expenditure tax" advocated by the Meade Committee in 1978 as "impractical and unrealistic."

It also argues that indexation of the tax base against inflation is unnecessary and undesirable and that mortgage interest relief is a sensible tax concession - interest payments, it says, should be more generally tax-deductible.

Tax havens provide the ideal model for a tax system, according to the institute. Britain, instead of regarding them as a threat, should seek to emulate them.

The *Direction of Tax Reform, Institute of Directors, 116 Pall Mall, London SW1Y 5ED, £2.95*

Forecaster expected to suffer funds cut

BY GEORGE GRAHAM

THE Government-funded Economic and Social Research Council (ESRC) is on the point of cutting its grant to one of the leading monetarist economic forecasters.

City University Business School (Cubs) is expected to suffer a cut in funding for its supply side model of the UK economy, although Prof Michael Beenstock, who heads the Cubes team, will continue to receive finance for his research activities. The Cambridge Growth Project is also expected to have its funding cut.

Provisional allocations for the next four years of grants have already been made, and the decisions will be finalised at a meeting in two weeks time before going to the full ESRC on July 18.

The other major macro-economic models - the two large models run by the London Business School and the National Institute of Economic and Social Research and the smaller Liverpool University model - are all expected to continue to receive ESRC funding at close to their current levels.

The different models adopt divergent policy stances, and the allocation of ESRC funding can raise political hackles. The last grants round in 1982 aroused controversy when the neo-Keynesian Cambridge team's grant was cut in favour of the two more monetarist teams at Liverpool and Cubs.

The National Institute's is the oldest established model, with a broadly Keynesian stance, although it now incorporates some of the "rational expectations" theory pioneered by Prof Patrick Minford at Liverpool.

London Business School, whose team is headed by Professor Alan Budd, also now incorporates rational expectations, and is particularly detailed in its modelling of the financial side of the economy.

The differences in the models can produce widely varied economic forecasts. The National Institute, for example, is the most pessimistic on the prospects for the UK economy, forecasting growth of 1.9 per cent this year and 1.7 per cent in 1987.

While London Business School has revised its forecast for 1986 growth down to 2 per cent, its projection for 1987 is a more optimistic 3.2 per cent. Liverpool, meanwhile, forecasts 3.5 per cent growth this year falling to 3.1 per cent in 1987.

The ESRC also makes a range of other grants for research, besides those for full scale macro-economic modelling.

Union attacks BR warning on dismissals

By Philip Bassett, Labour Editor

LEADERS OF THE National Union of Railworkers (NUR) last night dismissed as "impracticable and unnecessary" British Rail's warning that workshop staff who go on strike if a ballot opening today votes for action might be dismissed.

Mr Jimmy Knapp, NUR general secretary, said the position was different to that at Mr Rupert Murdoch's News International Wapping, east London plant. "There is no way you can sack 40,000 workers. There is no work force recruited in secret to replace them."

He forecast that if any workshop employees were dismissed on the scale which the BR board seemed to be indicating, the railways would "grind to a halt" within 48 hours.

Speaking on the eve both of the ballot and of the opening of the NUR's annual conference in Weston-Super-Mare, Mr Knapp urged his members to call BR's "bluff".

Privately, though, many NUR leaders accept that the likelihood of obtaining a clear mandate for action from the ballot will be finely balanced, although they are prepared to continue with a lower key campaign if the ballot result, deemed sometime next week, goes against taking any action.

REPORT 1985 SOLID STRUCTURE

Our Balance Sheet Total rose in 1985 by 4.6% to over DM13.5 billion. This expansion was based both on deposit and loan activities with our customers. In the previous year we had room for growth due to a substantial increase in capital from our partial transfer to private ownership which we had initially used to increase our interbank position. In this sense our balance sheet structure has therefore shown an improvement in the year 1985.

Balance Sheet (in million DM)	1985	1984
Loans to Customers	6.090	5.588
Deposits	7.615	7.028
Loans to Financial Institutions	4.418	4.103
Liabilities to Financial Institutions	3.861	3.843
Business Volume (Balance Sheet Total plus Endorsement Liabilities)	13.546	12.953

Our interest and commission surplus (gross revenue) markedly increased by DM25.4 million or 6.2%. In spite of administrative costs, which are also related to our investments in electronic banking systems, we were able to increase the operating profit by 7.5% over that of last year. With a result in extraordinary business of approximately the same size as in the previous year, we achieved a balance sheet profit of DM30 million. We suggest to the General Assembly of Stockholders that it be utilized for a dividend of 12% or DM6 per share.

Our group report includes, among others, Berliner Bank International S. A. in Luxembourg, Allgemeine Privatbankendbank AG in Hanover, and Braunschweig-Hannoversche Hypothekbank AG, Hanover.

Profit and Loss Statement (in million DM)	1985	1984
Net Interest	342,3	328,5
Net Commissions	95,3	83,7
Operating Expenses (excluding Depreciation on Fixed Assets)	310,0	293,5
Operating Profit	127,6	118,7
Net Profit	30,0	26,1

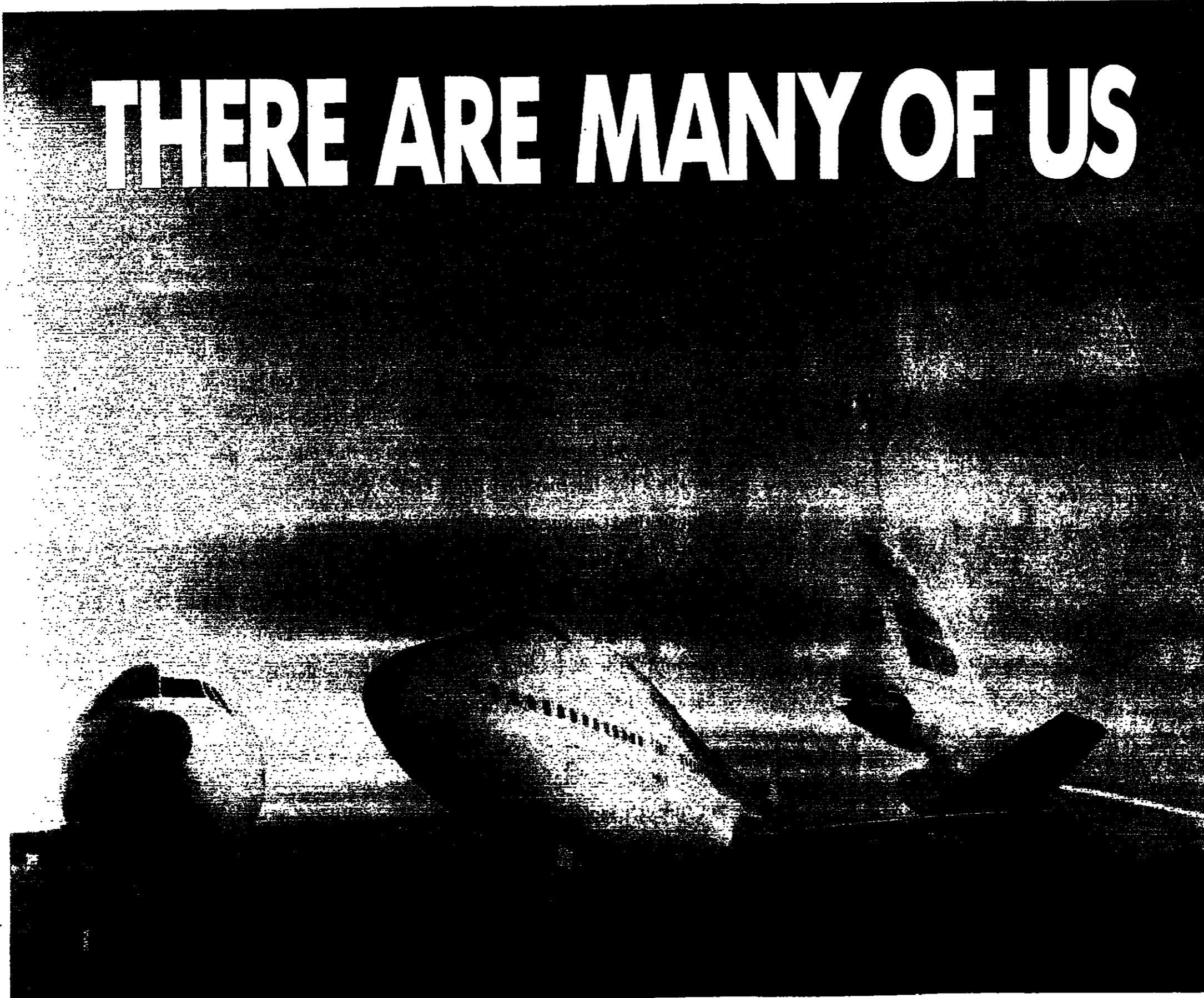
We are represented by 83 branches in Berlin, six full branches in the Federal Republic of Germany and a branch in London.

At the end of 1985 the total group assets amounted to DM 27.0 billion.

Our 1985 Annual Report will be provided upon request.

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UK NEWS

Woolworth problems 'unlikely to be solved'

By David Churchill, Consumer Affairs Correspondent

THE PROBLEMS faced by the Woolworth stores chain are unlikely to be solved by either Dixons - which is bidding £1.3bn for the company - or the present Woolworth management, says a retail report published today.

The report, by the Verdict market research company, is based on detailed forecasts for various retail sectors up to the end of the decade. Verdict says it "remains unconvinced that Dixons could provide all the answers to Woolworth's problems nor, for that matter, that any company can."

It suggests that both Woolworth and rival chain Littlewoods have "failed to find the right formula for success in the modern retail climate and unexciting growth is expected as a result."

The report believes that the outlook for retailing is bright up to the end of the decade. Verdict forecasts that between 1985 and 1990, retail sales volume will increase by 19 per cent. Sales value will increase from £87bn last year to £131bn in 1990.

The report also suggests that retailing is beginning to account for a larger share of consumer spending than in previous years.

"There has recently been a renewed release of energy in retailing," the report comments. "There are numerous examples of the resulting activity, many of which go to show that retailing businesses can be in charge of their own destiny and not simply at the mercy of outside economic forces."

The report suggests that not every part of the retail trade will prosper from the forecast buoyancy in spending in the shops.

The most successful sectors will be, in Verdict's opinion, do-it-yourself retailers, electrical goods outlets, drugstores, garden centres and grocers.

Among the successful companies over the next five years, Verdict identifies Burton, Next, MFI, Wickes, Dixons (before taking Woolworth into account), Sainsbury, Tesco, Kwik Save, Safeway, Harris Queensway, Texas and Marks and Spencer.

Verdict on retailing in 1990, published by Verdict research, 54, Britton Street, London EC1, price £650.

Kinnock support for coal-based power

BY PETER RIDDELL, POLITICAL EDITOR

ANY ADDITIONAL power stations ordered by a future Labour Government would be coal-fired, Mr Neil Kinnock, the Labour leader, argues this morning in a statement of the party's post-Chernobyl energy policy.

In an article in New Socialist magazine, Mr Kinnock pledges that Labour would "restore British coal as the prime source of British electricity supply."

However, the Labour leader does not promise the early end of all civil nuclear power generation in Britain.

This has been proposed by prominent members of Labour's hard-left such as Mr Tony Benn and Mr Eric Heffer who intend to make the issue a major one at the party conference in three months' time.

Rise in growth of large stores

By Our Consumer Affairs Correspondent

THE GROWTH rate of new superstores and hypermarkets increased sharply last year, according to figures from the Unit for Retail Planning, a private research company.

Some 29 superstores - stores with at least 2,500 sq metres of trading space - were opened as well as one hypermarket (defined as having 5,000 sq metres or more of selling space).

This was the largest number of stores to open in any one year since 1981 and is only two fewer than the peak of store openings reached in 1978.

Asda, part of the Asda/MFI group, is the main large store operator according to the Unit, with 82 superstores and four hypermarkets.

Tesco is in second place with 68 superstores and 11 hypermarkets, although with 16 stores with planning permission it is likely to catch up with Asda over the next few years. Asda has 11 stores with planning permission.

The unit points out that the J. Sainsbury chain has shown the most rapid superstore growth in recent years. From only nine superstores at the beginning of 1984, Sainsbury's had some 24 open at the beginning of this year with a further 17 in the pipeline.

The growth in the number of hypermarkets is again showing an increase after a decline in the early 1980s, the unit reports. At the beginning of this year there were six hypermarkets with planning permission, compared with two at the same time a year previously.

UK hypermarkets and superstores, published by the Unit for Retail Planning, 6-10, Bridge Street, Reading RG1 2LU, £33.

Retailer	Total	Planned
1. Asda	80	11
2. Tesco	25	16
3. Co-operative	45	43
4. Price Pave	37	2
5. Sainsbury	24	17
6. Morrisons	16	4
7. Carrefour	10	1
8. Hilleards	8	1
9. Presto	6	0
10. Sainsbury	6	1

Source: Unit for Retail Planning

Sterling 'must fall' to maintain growth

BY WALTER ELLIS

STERLING must fall in value over the next few years if the UK is to avoid a deficit on its current account and maintain economic growth, according to the monthly banking review of the American Express Company.

The alternative would be "continuing high interest rates with a high exchange rate and low inflation, but slow growth and further rises in unemployment."

The US banking and credit card corporation asks whether the UK can now ride continuing economic expansion based on a steadily declining currency without inflation picking up excessively.

The answer, it believes, may lie in the extent to which structural changes, especially in the labour market, have been achieved.

"If, despite high unemployment and these structural changes, real wages continue to grow strongly, then there is a risk that the fall in sterling required will bring renewed inflation."

American Express sees indications that economic policy will continue to be relaxed, albeit cautiously, over the next two years.

"With an election approaching and unemployment clearly a major election issue this trend seems inevitable.

Fiscal policy will be effectively relaxed by increasing asset sales and by actual spending reaching the top end of targets."

"The Government would clearly like gradually to lower interest rates provided there is no risk of a collapse in sterling. The environment for achieving this will be favourable if oil prices and world inflation continue low."

"A further decline in the dollar against European currencies would also make this objective easier."

American Express notes that if the Government has been successful in its efforts to reform structurally the UK economy, there should be no need to keep inflation at its central policy concern.

Efforts could be made instead to bring down the level of unemployment. Conversely, if the reforms have not gone deep enough, then a switch to greater stimulus - which American Express considers increasingly likely - would cause inflation to rebound.

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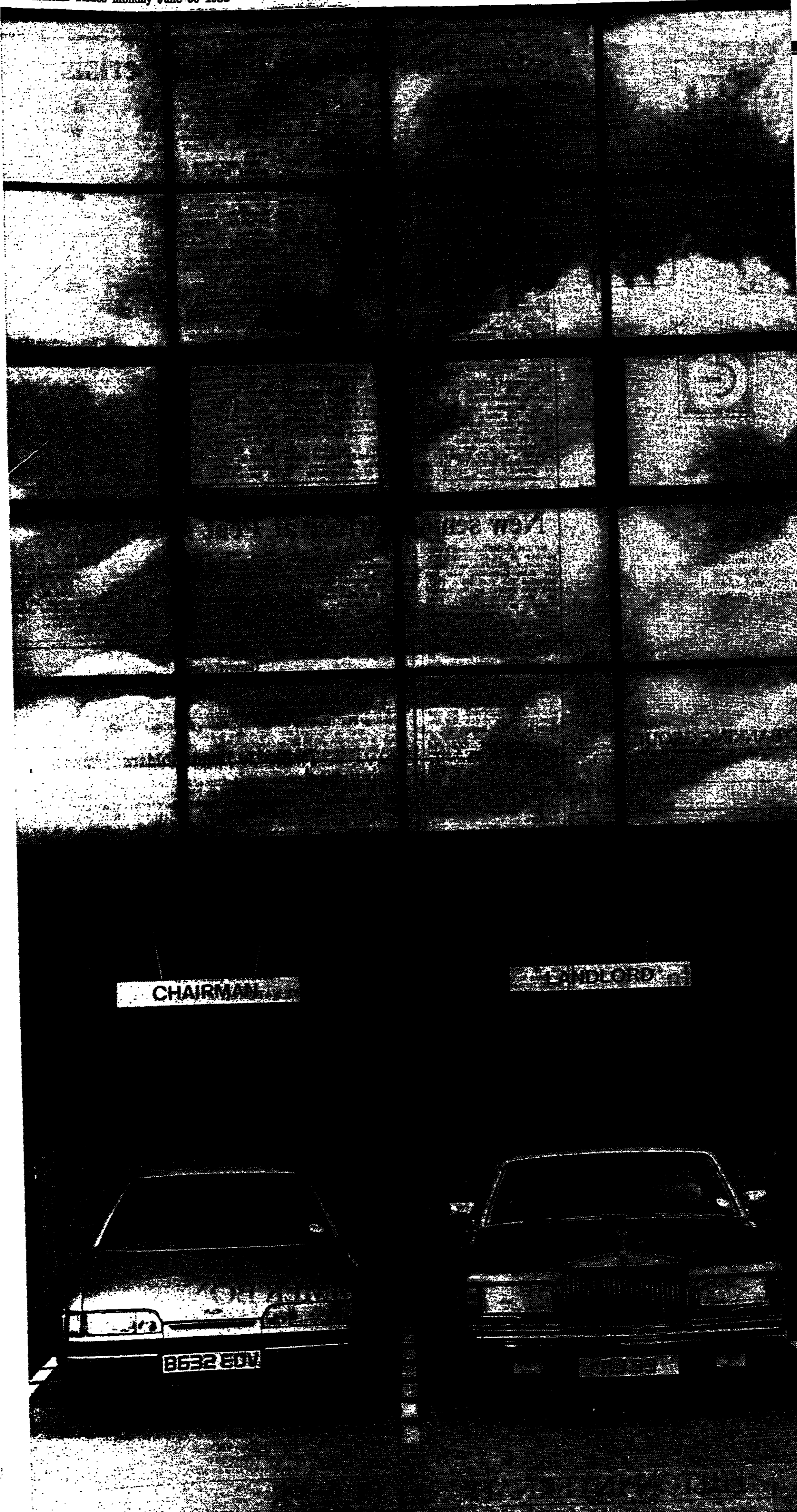
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Rise in growth of large stores

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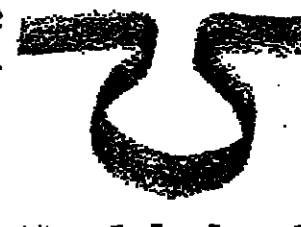
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INSURANCE

Tackling the US liability crisis

BY JOHN MOORE

THE LLOYD'S insurance community entertained its biggest producers of business — the US insurance brokers — in its new building in Lime Street last week. For most of the chief executives of the big US broking companies, it was the first time they had seen the new surroundings of one of the most important markets with which they do business.

The social occasion was overshadowed by the deeper concerns of the US broking community. In London last week, Mr John Bogardus, chairman of Alexander and Alexander Services of the US, one of the world's largest separate brokers, felt that the international insurance industry was "shooting itself in the foot" over the way it was dealing with the crisis in the liability insurance market.

Faced with large losses over several years, underwriters have raised insurance rates to prohibitive levels for the clients of insurance brokers, and in many cases have withdrawn from underwriting liability business. The consequences have created serious disruption in the US business and commercial community.

Mr Bogardus instances that in the US there is only one company that will manufacture football helmets, whereas there were 14 two years ago. "That is because of the liability problem," said Mr Bogardus. Companies in the US, fearful of growing legal action by

customers and former employees, the lack of insurance protection, and the high cost of court awards, have decided to end their operations or merge with stronger corporations.

The US insurance broking community is trying to respond to the crisis among clients by devising a range of funding schemes. Mr Bogardus's own company is formulating fresh funding arrangements for companies which cannot purchase liability insurance in conventional insurance markets.

These funding arrangements may take the form of a risk pooler arrangement between some Alexander & Alexander clients. Mr Bogardus feels that these arrangements may not necessarily be temporary and argues that important business may be lost to the insurance industry.

"I am not sanguine that this business will return to the former industry given that these companies are now making a 10-year commitment in some of their arrangements," he argues.

Therefore, because the insurance industry has not responded and adopted a flexible approach in the underwriting arrangements of liability business, it has not served itself well, he claims.

Alexander, the attitude to the liability problem is robust.

"It provides the brokers with tremendous opportunities," said chairman Mr Frank Tasco last week.

Not only were the brokers gaining from an increase in liability insurance premium rates — because their commissions are paid as a percentage of premiums — but it allowed them considerable scope for product design.

March & McLellan has responded to the liability crisis in two main ways. Most importantly, it has created additional capacity for large corporations to seek protection.

Last year, March & McLellan organised 34 large corporations, including IBM and Dow Chemical, in setting up an insurance company offering each policyholder \$100m (£65.4m) in cover against catastrophic losses of more than \$10m.

The scheme is called the American Casualty Excess Insurance Company (ACE), and operates out of Bermuda and the Cayman Islands. The new concern has capital and premiums of \$400m.

March & McLellan has formed another offshore company, XL Insurance. This is effectively a syndicate put together by another large US broker, Johnson & Higgins, and March of available, but cautious, underwriting capacity. Groups such as Astra Life & Casualty have

taken significant positions in the syndicate. The risks are dispersed across the participants in the syndicate, which reduces their losses and contains legal costs.

In the insurance industry there has been speculation that the crisis in the liability market could lead to a revival of the "captive" insurance market, in which industrial companies created their own in-house insurance groups to provide for their own corporate liabilities.

There has been a severe contraction in the activities of following insurance groups underwriting results from their participation in non-parent company insurance business.

Yet the revival in the captive insurance movement could be some way off. "The larger companies are going into group schemes," says Mr Bogardus, "rather than insurance arrangements."

It is the lack of reinsurance protection in the liability market, which was an important prop to the operation of the captive movement's activities, which could curb the captive's revival.

Mr Bogardus says: "Everyone is struggling to find an answer and find the best of what is available. The brokers have done all they can with the insurance companies. Now they are exploring the alternative funding possibilities."

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APPOINTMENTS

New senior partner at Peat Marwick

Mr Jim Butler becomes senior partner of PEAT MARWICK tomorrow. He takes over from Sir John Grenside, who has occupied the post since 1977, and who retires on September 30. Mr Butler joined Peat Marwick as an articled clerk in 1959. He was admitted to the partnership in 1967. He was partner in charge of the London region of Peat Marwick for five years before being appointed deputy senior partner in October 1985. His professional activities have included a post as adviser to the Treasury and Civil Service Select Committee from 1980 to 1982, and membership of the Serpell Committee, which was appointed by the Government to review the finances of British Rail.

I. J. DEWHEIRST HOLDINGS has appointed Mr Barry J. Allen as director of the company's activities.

CONTINENTAL INSURANCE (UK) has appointed Mr Michael Lamb as director and general manager. He was UK operations manager.

Dr E. J. (Trot) Walters has been appointed president of BP VENEZUELA from August 1. He is also appointed BP group representative in Venezuela, Colombia, Ecuador, Peru and the Caribbean. Dr Walters succeeds Mr J. F. (Tim) Odame, who will join the board of BP Venezuela in a non-executive capacity following his retirement at the end of 1986. Dr Walters is manager, projects, at BP Coal, London.

SYC DEFENCE SYSTEMS has made three senior appointments. Mr Dennis Egan, formerly director of operations of Short Brothers in Belfast, and Mr Alan Egan, formerly sales director of Linn & English (Dorset, Dorset) have both joined the company. Mr Egan is divisional director (Northern Ireland) and Mr Egan is marketing director (Northern Ireland). Mr Egan becomes UK product development manager. He was previously US production manager.

TURNER & NEWALL has appointed Mr Robert J. Smith as director of its subsidiary TBA Industrial Products from July 1. He will also be general manager of TBA's research and development, of which he is currently marketing manager.

HARVEYS OF BRISTOL has appointed Mr Bryan P. Field as UK sales and marketing director. He was marketing manager for Gillette UK.

LLOYDS MERCHANT BANK has expanded its syndicate and primary market desk under Mr

John Mitchell, head of capital markets. Mr John Henderson, senior assistant director, is now responsible for the syndicate and for the day to day management of primary market activities, with Ms Sandra Curtis, assistant director, assisting specifically on sterling issues. Mr Mike Lawrence, senior assistant director, will continue on

the syndicate desk, and will co-ordinate Lloyds Merchant Bank's new syndicate marketing and syndication functions.

Mr Christopher Strickland has been appointed to the board of GREYCOAT GROUP. He is responsible for the group's construction activities.

Mr Iain W. St. C. Scott has been appointed divisional general manager, accounting and finance, of the BANK OF SCOTLAND. He takes over from Mr Robert Smith who has retired. Mr Scott was previously assistant general manager, corporate planning, for which he will continue to be directly responsible.

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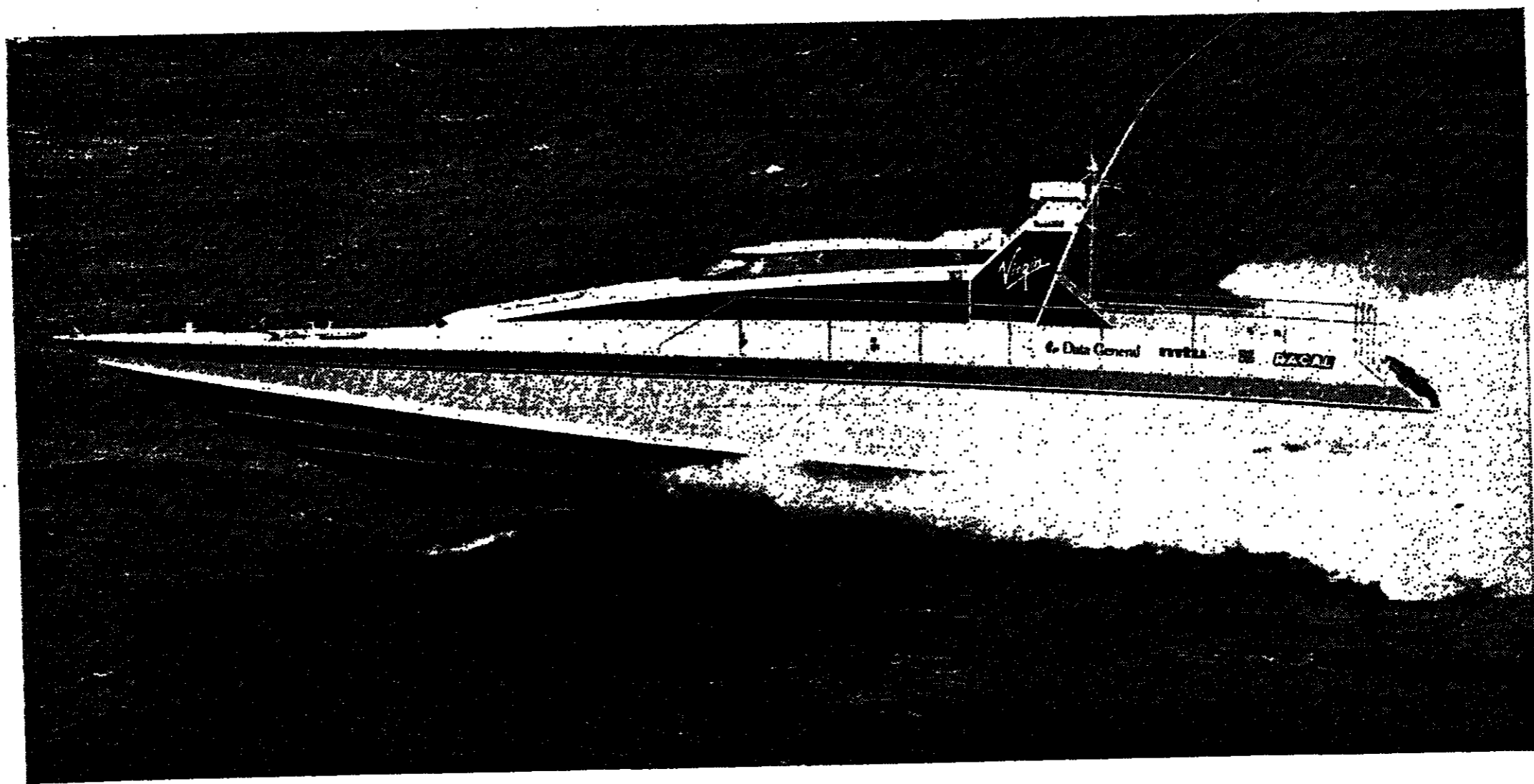
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THE PACIFIC FUND S.A.
Notice of Extraordinary General Meeting of Shareholders

MURRAY FUND S.A.
Notice of Extraordinary General Meeting of Shareholders

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Notice of Extraordinary General Meeting of Shareholders
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THE WEEK IN THE COURTS

The rights of the accused versus the soaring cost of legal aid

THE ADMINISTRATION of a state-funded legal assistance scheme is, after nearly 40 years, overdue for a shake-up. The Government's Efficiency Unit has scrutinised the system and proposed a radical revision of legal aid...

It has been the failure of the practitioners in the criminal courts to curb the excess of prolix advocacy that has appreciably lengthened the time it takes for a criminal trial. When the Roskill committee recently recommended a specialist tribunal to save time and money, the Criminal Bar Association hotly opposed such willingness to make procedural changes in order to cut costs.

Those who argued for a 'consumer voice' in the administration of legal aid can feel they have had second best. In fact, it has been neither of these. At birth it represented a fresh and more realistic approach to an old problem - how to fund legal aid and advice available to those who could not afford it.

immense impact on the development of legal aid. Those who argued for a 'consumer voice' in the administration of legal aid could feel they had a very good second best. The provision of legal aid has proved to be a much more difficult task in which to satisfy the needs of the public. There are no arrangements for co-ordinating the voluntary agencies and the private legal practitioners who provide more or less expert advice on a vast range of similar matters.

Qualifications plan for professions urged

STRONG SUPPORT for the idea that the professions should be included in a national scheme of vocational qualifications has come from seven professional bodies associated with the business sector. The heads of the organisations have expressed their desire to be involved in a letter to Lord Young, Employment Secretary, who is expected this week to publish a white paper on education and training.

The seven supporting professions wrote: "We believe that the future of our professions is inextricably linked with the success of commerce and industry in the UK and that we have a major interest in the development of vocational qualifications and education in this country at all levels. We want to be at the centre of that development and not outside it."

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Contracts and Tenders INVITATION TO TENDER London Regional Transport Bus Service
London Regional Transport invites tenders for the operation of a new high frequency small-bus service, between Oxford Circus, Camden Town and Parliament Hill Fields. It will replace the service currently provided by route 53 over that section.

Papua New Guinea Electricity Commission MANAGEMENT EFFICIENCY REVIEW
It is a requirement of the Papua New Guinea Government that the Papua New Guinea Electricity Commission must, on a five (5) yearly basis, review Management Operations with the view to answering the question: "Is Elcom an effectively managed organisation given the environment in which it operates?"

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Company Notices Milk Marketing Board £75,000,000 Floating Rate Notes 1983
In accordance with the provisions of the Notes, notice is hereby given that the rate of interest for the three months period 26th June, 1986 to 26th September, 1986 has been fixed at 9% per cent. per annum. Coupons No.2 will therefore be payable on 26th September, 1986 at £1,252.40 per coupon from Notes of £20,000 nominal and £125.24 per coupon from Notes of £5,000 nominal.

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Higher education in Britain

Time for a new school of thought

In an open letter to Kenneth Baker, the Education Secretary, Patrick Goldstream argues for new links between businessmen and academics to avert a crisis in colleges and universities.

ON THE day you got your new job I reported to the Council for Industry and Higher Education on three months of consultation with universities, polytechnics and industry. The council is a group of 20 chairmen of very large companies and ten vice-chancellors and polytechnic directors promoting the relationship of business and higher education. I had talked to well over a hundred important people (vice-chancellors, poly directors, chairmen, research directors, professors) and hope you will be interested to share my conclusions which are an amalgam of theirs.

The best academics and the best businessmen are fast learning to speak a common language and, indeed, are using it to say much the same thing. This is that higher education faces imminent crisis and that just when we see it as the critical economic asset for the future.

That is not to say that students are not being taught and research not being researched. What is more, the demand for "technology transfer" coupled with financial pressure has spawned a positive boom in "links" between business and higher education. Joint professorships, joint degrees, joint research products, joint consultancies, university holding companies, science parks, industrial awards in universities and government awards for academics in business, new consortia to establish industries' needs for continuing education: all these bloom, some amateurishly, some full of professional promise, like a thousand flowers.

But these, imaginative and encouraging though they be, are only at the margin. At the centre of things sensible businessmen and sensible academics feel an aching lack of policy. The evidence they point to is a list of contradictions.

Boards of directors have, belatedly no doubt, at last begun to hear the message (from ministers, the National and Economic Development Office, the Manpower Services Commission, consultants and pundits) that they need more educated people throughout their workforce. But at precisely this moment the Government is publicly planning for a reduced supply of graduates on demographic grounds. It must be absurd for there to be no agreement on even the principles which should govern choices about the future capacity of the higher education system.

Moreover, the critical numbers debate is conducted largely in old-fashioned terms of three-year conventional degree or part-time student. But at just this moment both companies and institutions are poised to embrace learning patterns with interestingly blurred outlines: degrees that last into working life, that are mixed up with work experience and even awarded some of it towards qualifications, or that include some portions of the companies' own in-house training as part of the syllabus. These need to advance very rapidly. The ingredients for a new policy, radical and essential, are felt to be lying around now but no one puts them together.

There is a contradiction of intention and result. With the aid of some £50m in cash and kind from business, new student places were created for training in information technology. But in practice potential poly students took up the extra places in universities and some poly places were left unfilled. Everyone turned to the schools to look for a sound output of science-based candidates only to be faced with the appalling figures of shortage for mathematics and physics teachers.

Take again the reactions of the institutions themselves to the reduction in their grants at the beginning of the 1980s. The sudden need to get more teaching for their money was barely compatible with a national need for more science engineering places since the scientists and engineers cost so much more per head to educate than do the humanities students.

schemes again, if not skilfully handled, have left many of the "wrong" leavers of the "wrong" ages in the "wrong" places. Industry perceives, of course, that high-powered scientists and technologists are among those that find it easiest to go. So that now there are a number of important and "relevant" university departments so demoralised by talent that they have fallen below the size critical for any real effectiveness.

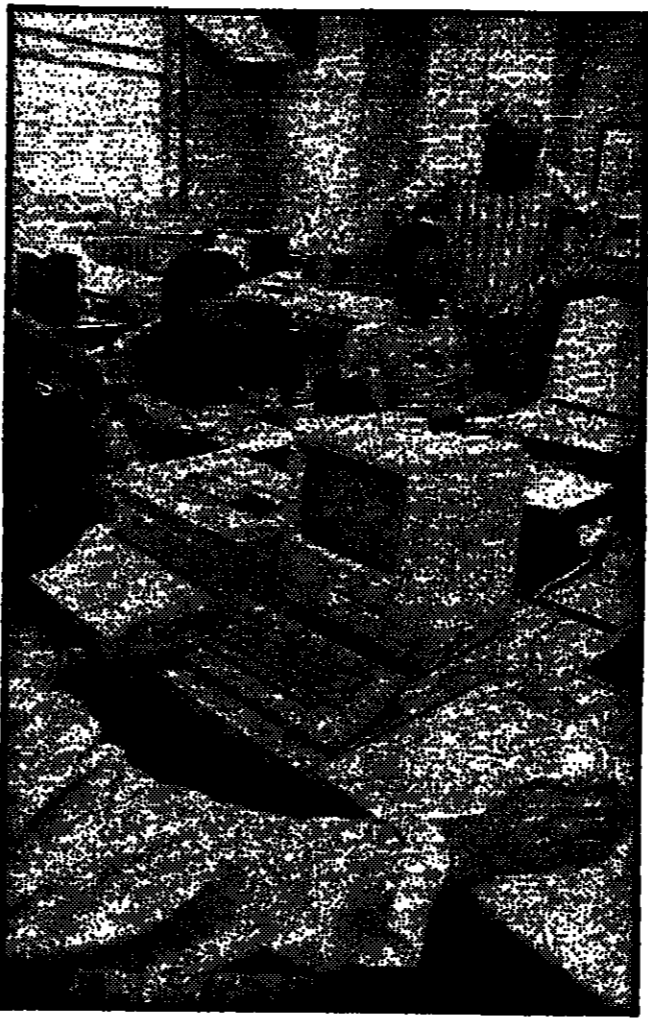
If industry is to be tempted to contribute more to our higher education, there will have to be better ways of allocating rationally the resources available. There is still no forum for setting priorities or maximising national economic return from scientific research, as the cabinet's own advisory committee (ACARD) recently reported. Nor are there schemes for the strategic siting and co-operative use of the extremely expensive equipment on which much research in the international league increasingly depends.

Companies even complain that they receive few joint proposals from institutions for help with equipment installation. Yet if the present machines have been hard to afford, many professors will find the next generation entirely beyond their purse except as part of some co-operative effort.

And in the longer run academia too must work within the constraints of international competition; brains will drain to where research facilities are best.

And finally, ask industrialists how can the chairman of the University Grants Committee (UGC) be threatening the closure of universities when the national discussion has hardly begun on the capacity needed for "continuing" education and for re-training and updating the armies of employees that are going to need it. Is it not missing the point, moreover, for the UGC to rank academic departments for the receipt of grants without reference to the industrial need for the particular research work undertaken?

The contradiction is summed up like this. Eighteen months ago the much-quoted NEDO report, Competence and Competi-



TODAY'S STUDENTS: Are there enough to meet industry's needs?

tion, showed the UK workforce to be badly under-educated by international standards. This month the Institute of Manpower Studies after an enormous survey shows that managers need broader perspectives, while workers without education and skill are increasingly likely to get sacked and stay sacked.

So higher education, its vital task reaffirmed, ought to be holding its head high and stepping confidently into the breach, which would of course be the right stance for winning the co-operation, not to mention the resources, from industry that everyone knows will be needed if we are to get the modern learning system we need. Instead, however, higher education feels drearily constrained from taking initiatives, hit over the head, unrecognized and unable to plan.

Paradoxically the impending damage is concealed by the counter-irritant of the Government's financial cutbacks. It is too easy for real long-term concern to be submerged by the need to complain about the immediate emergency. The real objection to the current squeeze,

though it has almost certainly gone too far, is that it is extremely inefficient and that it is not accompanied by investment in radical and rapid change. In short we are achieving too much pain without the means of a cure. There is not even a prognosis.

Here then must be an opportunity for a new Secretary of State. After all there is not a lot of money and not much time before the election for you to achieve a lot but if you were to offer a serious new forum and a new machinery thinking (with serious input, but without bossiness, from industry and commerce) about the desired relationship of higher education to the economy, I believe you would find an immediate response.

Certainly you should find it possible to talk about an equal partnership of wealth creation between those responsible for creating skilled and educated manpower (presumably the best, wealth of all) and those responsible for using it in the marketplace.

Demise of the City gent

By Barry Riley

FORGET THE scrapping of commission scales, the introduction of dual capacity and the arrival of the big international banks and securities houses on the London stock market scene. Such developments may constitute the generally accepted City revolution; but for many practitioners in the Square Mile the real revolution lies in the drastic changes in their style and conditions of working.

It is not many years since gilt-edged brokers and jobbers, for example, led a comparatively relaxed existence in London. The market did not

don't run early enough. Curiously, stock market trading now begins earlier in London in terms of local time than in New York, despite the reputation of still tougher conditions for Wall Street traders. There is in fact a lot of debate about whether trading on the New York Stock Exchange should open at 9.00 rather than 9.30, and the top men in the securities firms are rather keen on the idea. The average trader, not surprisingly, is considerably less enthusiastic.

To some extent the pressure for extended hours comes from

tradition and competition was regulated out of existence. But now the "open all hours" markets in London are beginning to have an impact on a number of continental bourses.

The Paris Bourse, for example, is moving away from its historical pattern of opening only for two hours from 12.30 to 2.30.

The trend seems inevitable. But it is worth asking whether the final investor is really going to benefit. The main beneficiaries of extended trading would appear to be the professionals — and not just the fund



open until 10 am, but there just might be a conference to attend at 9.30. The official close was 3.30 (which it still is) and though there might be some after hours trading, it was unlikely to stretch beyond 5 pm.

But in two stages the market's opening has now been brought forward to 9 am, and in an increasingly competitive environment 8 am morning conferences are becoming the rule. It isn't a life for gentlemen any more.

In more international markets, things are worse. Most of Europe is an hour ahead of London, so the market makers in European stocks at Savoy Millin, for instance, are trading from 8.30. At the other end of the day, dealers work a duty rota to handle New York trades up to Wall Street's close at 9 pm London time.

The rot has similarly set in outside the securities market. At Union Discount these days, the first deal is done around 8 am and business continues until 6 pm. It is a far cry from the good old days when discount market hours were roughly ten to four, including a long lunch.

The intensity demanded of key personnel in today's financial markets scarcely goes with a rounded lifestyle and balanced family life. Money in plenty there may be—but there are also hard luck stories of stock market men being forced to move from their elegant stockbroker hole residences to London flats because the first trains

the globalisation of the investment industry, making it possible to transact business in other time zones. The workaholics in the Chicago futures markets have even talked about sessions in the wee small hours.

More fundamentally, however, the trend appears to be related to the growing amount of professional trading on the markets. Because the professionals are at their desks all day watching screens, they are ready at any time to trade anything that moves.

In the US Treasury bond market the volume of trading between the professionals—admittedly on tiny margins—is reckoned to be four times as great as the amount of business actually done with genuine final investors.

The limit of the process then becomes determined by the sheer stamina of the practitioners, up to the point at which they would need to double-shift, thus seriously undermining the economics of the operation.

This internal, professional orientation of the securities markets is relatively new. The old approach is still evident in continental Europe, where hours of trading are much shorter and may amount to little more than a callow of listed stocks once or twice a day.

The attitude is that if investors want to trade they will best wealth of all) and those best a path to the exchange. This was all very well when markets were dominated by

managers at investment institutions but even more so the specialised traders within the security houses engaged in activities such as "programme trading."

To the uninitiated, this is an increasingly popular New York activity which is based on a kind of arbitrage between the stock market and the futures market, whereby stocks or stock options can be hedged against stock futures contracts. The profit is generated from the anomalies and inconsistencies which arise from time to time in the different markets.

To the extent that trading on the stock market is at best a zero sum game, and is in practice a negative sum game allowing for the costs of the system, such profits made by securities market professionals must be at the expense of genuine investors. It is a moot point whether factors such as increased liquidity or better hedging facilities can compensate them.

None of which is an argument for adopting the approach of, say, the Trondheim stock exchange, where trading takes place at 1 pm on Wednesdays.

But the investor dreaming of the ability to pick up his telephone at any time of the day or night and plug into the global 24-hour market place will need to be aware that costs of such a technological extravaganza will be high, and in the end he will pay.

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THE ARTS

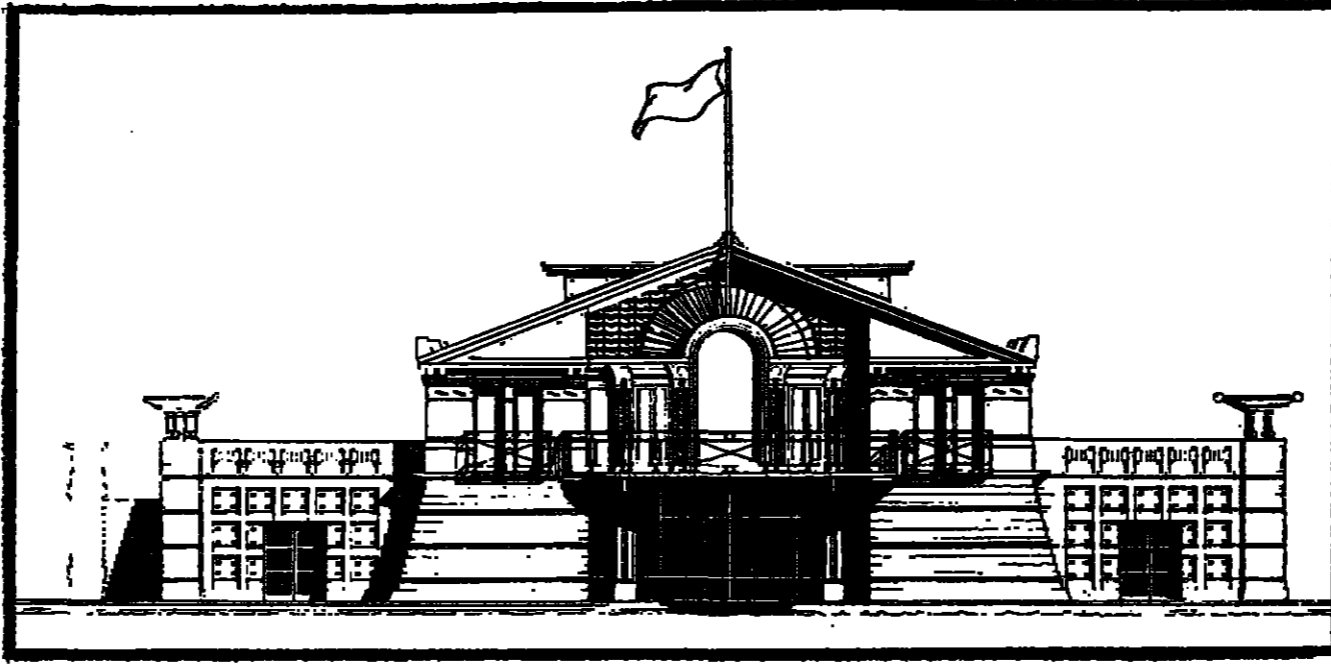
Kuijken & Tate/Elizabeth Hall

Dominic Gill

The Age of Enlightenment, who made their London debut on Friday night in the Previn Music Festival... The orchestra is self-governing, and "intends to invite some of the most distinguished international conductors from both the original instrument and modern worlds of music to be guest directors."

Architecture/Colin Amery

A deadly sin committed at Henley



A new temple by the Thames, headquarters of the Henley Royal Regatta, by the Terry Farrell Partnership

When the Henley Royal Regatta opens on Wednesday much of the preparation will have taken place in the brand new Regatta Headquarters. They stand right next to the five-arched, stone, late 18th century bridge, raised to the same height on a large brick plinth. The architects are the Terry Farrell Partnership, frequently described as Britain's leading post-modernist practice.

pediment of this size a much larger and better-proportioned main floor is required. What is in essence a bungalow cannot bear the weight and associations of this pediment but the architects do seem to have been aware of this solecism. They have tried by dint of a lot of glazing to suggest that this is just a modest pavilion, somewhat embarrassed to have to support the revival of the Classical tradition.

More Previn/Festival Hall

David Murray

The free programmes at Friday's "André Previn Festival" concert set a fine and British precedent, but they didn't include the words of Ravel's L'heure espagnole. For an audience of mostly monoglot Anglophones, that was a bit dampening. Robin Goldring, who has been playing too much French, but there's no substitute for matching Franc-Nohain's mock-classical verse with Ravel's neatly comic setting.

Pearl Bailey/Festival Hall

Kevin Henriques

Though she cannot be classified as an out-and-out jazz singer Pearl Bailey is essentially an improvisatory performer as she so engagingly proved on Saturday evening in her recital with the Louis Bellson quartet, part of the second André Previn Music Festival. Her strong show business roots—she started out as a specialty dancer in the 1930s—have blessed her with a sharp, sly wit, an ability to cope with any situation and to take firm command of an audience with any chance of being disconcerted.

The Dream/Covent Garden

Clement Crisp

Cast changes and débutés were on view at the end of last week in the Royal Ballet's current Ashton triple bill, with the inexplicable irruption of Jiri Kylian's Return to the Swan Lake on material unworthy of her. Exceptions were gentle "Easy to Love" in which she essayed some extended hoofing, which did little to help her breath control, and "Fly me to the Moon."

Infidelities/Boulevard

Michael Coveney



Jiri Bennett

The latest attempt to merge the Boulevard, a useful off-Broadway style venue snuggled up against Paul Raymond's Revue Bar in Walker's Court, Soho, brings to London Sean Mathias's Ortonesque (I apologise for the adjective, but it is unavoidable) little sex farce, which Martin Hoyle reviewed on this page at last year's Edinburgh Festival.

The Legend of Padgate

Michael Coveney

Padgate is a new town development near Warrington for which Charlotte Keatley and her cast of local schoolchildren and amateurs have devised a medieval pageant wagon that stages in Padgate's well appointed studio theatre and moves, courtesy of the Warrington and Runcorn bus service, to the Cinnamon Brow Community Centre.

Shell/LSO's first decade

Stephanie Gonley has won the tenth Shell-LSO Music Scholarship, worth £4,000, the prize money for which she is smoothing the path of the recipient towards a professional career in music.

Saleroom/Antony Thorncroft

Two of the very best

Two very important British collections of Japanese art are being auctioned at Sotheby's this week: the late Dr Francis Springell's Old Master drawings and the English 17th and 18th century ceramics which he long displayed in his house at Rous Lench in the Vale of Evesham.

Arts Guide

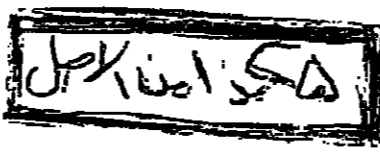
Music/Monday. Opera and Ballet/Tuesday, Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

- MUSIC LONDON Alfred Brendel, piano and Heinz Holliger, oboe with friends. Beethoven and Mozart. Royal Festival Hall (Mon), (023 3191).

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Only in the Financial Times



As France's privatisation programme begins, British bankers are looking for business, and some French bankers are seeking new jobs

Foreign bankers circle over Paris

LONDON merchant banks and large Wall Street investment houses are indulging these days in a "summer beauty contest" as they call it in Paris. All are busily promoting their services and talents to try to cash in on the opportunities which the French conservative government's industrial and banking privatisation programme is likely to offer.

Kleinwort Benson shows to select visitors at its discreetly opulent town house in the well-wooded 16th arrondissement of Paris a list showing that it has been by far the most active merchant bank involved in Britain's privatisation programme. It is also forging a close but not exclusive relationship with Credit Commercial de France (CCF)—the large French state bank regarded as an early candidate for privatisation—to help strengthen its chances of playing a significant role in privatisation in France.

Morgan Grenfell, which has traditionally had links with the French Indosuez banking group, has just hired as chairman of its Paris subsidiary, Mr Jean-Pierre Souviron, one of the architects of French industrial policy during the Giscard d'Estaing presidency who has good connections with the new right wing government.

County Bank, the merchant banking subsidiary of National Westminster, is planning to send a full time representative to France in the autumn to follow closely developments on the French financial scene.

Most of the other leading British merchant banks have also been training their sights on France, sending representatives over with increasing regularity on the London-Paris air shuttle to see what business they can pick up. The British Embassy in Paris and the UK Treasury in London have also been promoting French banking services abroad. They have been steering French administration and company officials to seek privatisation advice from London merchant banks and recently organised a successful seminar in Paris on the British privatisation experience.

These initiatives have been all the more welcome for British bankers in the face of aggressive efforts by US banks and investment houses to sell their services to French companies and banks due to be privatised.

Of all the American banks, Morgan Guaranty with its long term presence in France and its imposing Paris headquarters in Place Vendôme, is generally regarded as the best placed US financial institution in France. "Moreover, they are extremely discreet and low key compared to other American banks and did an excellent job at advising the French government over the Channel Tunnel," said a British competitor.

For international banks and merchant banks, privatisation offers four opportunities. The first two involve advising (1) government on one hand and companies and banks to be privatised on the other. The third business is helping to put together groups of shareholders to acquire a major or controlling stake in a newly privatised group.

The fourth role international banks can play in French privatisation is in the distribution, placement and underwriting of new equity abroad.

The competing banks are also keen to play a major role in the very first French privatisation deal. "There is tremendous prize attached to whoever leads or is heavily involved in the first deal," said another international banker.

Investment bankers are divided over the opportunities offered in advising the French Government on privatisation. One school believes that there is only a limited role for foreign banks since the French Treasury, clearly wants to mastermind the whole privatisation programme itself.

Moreover, the French government seems to be extremely suspicious over the real motives of foreign banks. Although the government plans to offer about 15 to 20 per cent of the new shares of privatised companies to foreign investors, it is anxious to ensure it knows who is buying the shares abroad.

One element making life more difficult for British merchant banks is the worry of the French government over British institutional investors. "The French are anxious and sceptical about the genuine portfolio interest for privatised stocks particularly in London," said a British banker in Paris. "They are worried that it is the Lazard group which is the London institutional investor who were pulling out of French stocks during the recent short sell-off in the Bourse. Some French companies like L'Air Liquide and Pernod Ricard have also had bad experiences in placing shares in London. The volatility of British institutional investors has given London a bad reputation," he added.

But another school of British bankers believes that the French government is open and indeed seeking advice.

However, all bankers agree that no foreign financial institution will be able to lead or co-ordinate the whole privatisation of a French company or bank. French financial institutions are expected to lead privatisation projects. But many think that will be associated with foreign banks.

In this respect a bank like Lazard Freres, which is wholly French but has a long history from its sister banks in the UK and US, is in a good position.

But if international banks and advisers are appearing in short term and longer term opportunities in French privatisation, they are also showing increasing signs of frustration over the delays in the implementation of the government programme. The timetable of privatisation has been steadily slipping and the Government appears in no hurry to rush through privatisations of companies and banks.

For the London and Wall Street investment banks the main concern is to find out what is happening on the privatisation front in France and to prepare to seize opportunities when they emerge. "Information is the name of the game," said a British merchant banker.

"It is very important to be known by the French authorities not only to secure business but also to find out what is going on," he added. "With about 65 companies to be privatised of which between 12 and 15 are major industrial or financial groups, you have to know where to concentrate and direct your marketing efforts. You must find out which company is doing well and which will be privatised first. And naturally you must keep an ear close to the ground to find out the latest gossip in the state chairman who will survive and those who will be dropped."



JEAN DEFFLASIEUX: Ready to quit with dignity

Ready for the revolving door

"WHETHER I stay or go, I will remain our homme d'affaires," says Mr Jean Peyrelevalde, chairman of Compagnie Financière de Suez, the French state-owned financial group and one of the plums on the right-wing government's privatisation list.

Mr Peyrelevalde is one of the more than 60 chairmen of nationalised banks, industrial groups and insurance companies whose future will be decided in the next few weeks.

The government's choice, to be announced after months of discreet but intense jousting for the top posts, will reward or frustrate personal ambition among some of the biggest names — and egos — in the French business world.

More important on a wider level, the government, facing considerable temptations to organise a mass purge, will have to try to avoid damaging shake-ups in enterprises now preparing for the challenge of denationalisation.

Mr Peyrelevalde, in his quiet way, is one of the most controversial of the present state chairmen — an appears one of the most likely to be asked to find another job.

Mr Peyrelevalde arrived just over three years ago at the modestly elegant headquarters of the company that for nearly a century ran the Suez Canal. Even conservatives admit he has made a success of running the group.

But Mr Peyrelevalde, a one-time aeronautics engineer who made a career with Crédit Lyonnais, the second biggest nationalised bank, is also a Socialist. He served between 1981 and 1983 as a chief adviser to Mr Pierre Mauroy, the first prime minister in the previous left-wing government.

Mr Peyrelevalde was one of the main executors of the Socialist 1983 nationalisation which the Right now proposes to unravel. The government also intends to sell off enterprises — like the three biggest banks and the Elf Aquitaine oil group — taken over after the war.

Mr Peyrelevalde says he is "relaxed" about the future. His morale has been stiffened by the receipt of several preliminary job offers in business and commerce. His case however highlights a dilemma for the government as it prepares the personnel changes.

The task is somewhat paradoxical. The administration was elected in March on a platform of non-interventionist economic policies.

But Mr Jacques Chirac, the Prime Minister, together with a handful of senior ministers, now have the power to hire and fire the men at the helm of a financial and industrial empire which makes up a large chunk of the French economy.

appears to be an inevitable order to quit his mahogany-lined chairman's suite.

Mr Defflasieux, promoted in 1983, admits he would have remained number two or three in the bank but for his Socialist links and close friendship with Mr Mauroy.

He runs the bank with pride and passion. Critics say he is too close to the bank and its traditions, unable to take strategic decisions and to break through the power of vested interests who are blocking change.

He has none the less presided over a build-up in profits. Socialist connections notwithstanding, he had a furious row with Mr Pierre Berge, the then Finance Minister, last August when the latter accused him (wrongly) of leaking news of a dispute over the government's wish to recall early a 15-year-old loan to the bank.

The uncertainties over changes at the top are already having a debilitating effect as managers and business partners wait for news of who will be in charge.

The chairman to be appointed by the government in the next few weeks may also turn out to have only temporary control.

With a number of financial and industrial groups waiting in the wings to seize privatisation possibilities, the eventual heads of denationalised companies will be a matter for their new shareholders.

Mr Jean-Marie Vermees, the veteran financier and industrialist who is an ally of Mr Chirac, and was ousted from his loss-making family bank, Banque Vermees, after nationalisation in 1982, pointedly says that the new chairmen will be "interim" appointments.

Mr Vermees, chairman of the Beghin Say sugar company now controlled by Ferruzzi of Italy, says he aims, in league with other institutions, to bid for both Suez and the Group des Assurances Nationales insurance company.

Mr Peyrelevalde says uncertainties are starting to unsettle planning at Suez. But as a member of Mr Mauroy's team handling the nationalisation process five years ago, he sees the problem from the other side too. Then he had a big hand in unsettling the former patrons of groups taken over in 1982.

David Marsh

UK PRIVATISATION RECORD ...

Bank	Company	Amount (£m)
1 Kleinwort Benson	British Aerospace, Cable and Wireless, Associated British Ports, Enterprise Oil, British Telecom	5,709.4
2 Lazard	British Aerospace, Britoil	724.1
3 Schroeders	Associated British Ports, Cable and Wireless	529.8
4 Rothschild	Aeromarine International, Britoil	309.8
5 Hill Samuel	Jaguar	293.5
6 Warburg	Britoil	274.3
7 Morgan Grenfell	Aeromarine International	35.5

... AND THE FRENCH AGENDA

	Profits *FFr	Turnover *FFr
CGE	1,185bn	71.9bn
Saint-Gobain	750m	66.7bn
Pechiney	732m	35bn
Rhone-Poulenc	2,5bn	54bn
Thomson	533m	89.8bn
Elf-Aquitaine	5.3bn	180.7bn
BNP	1,77bn	950bn
Credit Lyonnais	1.2bn	942.7bn
Societe Generale	1.4bn	738.2bn
CCF	255.6m	160bn
Suez	1,52bn	900bn
Paribas	1,25bn	551bn

* All 1985 figures

Paul Betts

Co-operative profits

From Mr C. Cattell
 Sir.—It was pleasing to read William Dawkins' report (June 16) concerning Mr John Smith's proposals to permit workers' co-operatives to relitigate profits from corporation tax. The Labour Party spokesman on trade and industry was highlighting the fact that workers' co-operatives suffer from a number of tax disincentives. In this context, Mr Smith's proposals are an appreciation of the arguments put forward by the Industrial Common Ownership Movement in its taxation submission to the Chancellor of the Exchequer earlier this year: arguments which have also found favour with the Alliance Parties.

Unfortunately, the Government's stance would seem to be to let workers' co-operatives should abandon their principles in order to qualify for current fiscal incentives. This strikes us as a somewhat negative approach to a small but growing sector of the economy, and one which—by virtue of these principles—offers employment which is stable and locally based, and provides new opportunities to many unemployed people.

Your correspondent also reported that workers' co-operatives cannot raise share capital on the open market because equity may only be held by members of the co-operative, and that this is a rule "imposed" by ICOM. This statement is misleading in two respects.

The overwhelming majority of workers' co-operatives are operating through the ICOM office at a current rate of around 17 per month, of which 97 per cent are registering as companies limited by guarantee. Assets are held collectively by the co-operative and not by individual members (hence "common ownership").

This structure is not imposed on co-operatives by ICOM. ICOM is primarily a voluntary association of workers' co-operatives and its policies reflect the views of its members. There are good reasons why the common ownership model is preferred. Many of the workers' co-operatives were formed by unemployed people who do not have the financial resources to invest in their business. If money were placed at their disposal, they would have the equity, one could soon have the situation where control of the enterprise was in the hands of outside shareholders rather than the members. Financing by principle of the co-operative loans affirms the growth in value of capital. The limited return of equity shareholders out of proportion to the returns to employees of a workers' co-operative would be in breach of

Letters to the Editor

co-operative principles. Inevitably it can be argued that workers' co-operatives are making things difficult for themselves by presenting to potential providers of finance a balance sheet which is lopsided because of the absence of share capital. The experience of many workers' co-operatives however is that with a sound business plan they can succeed. Certainly the track record of Industrial Common Ownership Finance (ICOF), the national revolving loan fund, indicates that workers' co-operatives present a better opportunity for a safe return on capital than other comparable small businesses.

Nevertheless, in an attempt to remove problems in securing finance, ICOF has put forward proposals to provide the same tax relief for investors in loan stock as for investors in shares, subject, of course, to the principle of a limited return on capital.

The co-operative movement has always considered that the creation of wealth should be used to benefit the community, and that this is a rule "imposed" by ICOM. This statement is misleading in two respects.

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This campaign has recently completed a survey of aircraft manufacturers and importers, which demonstrates that over 40 per cent of new cars can now use lead-free petrol. By 1987, the figure will have risen to 70 per cent, and by 1988/89 virtually all new cars will be designed to use unleaded fuel.

Consequently there is already a substantial market for this product, which could be fully exploited if the Chancellor would fulfil the undertaking made in his Budget speech this year to introduce financial incentives to encourage the use of unleaded petrol.

(Dr) Robin Russell Jones, 3 Endsleigh Street WC1.

Pay levels in South Africa

From the Executive Secretary, Ethical Investment Research and Information
 Sir.—Patrick Gillam (June 20) states that your report "UK companies pay South African blacks below target" misrepresented the facts when it quoted British Petroleum as paying only R198 to its lowest paid employees in South Africa, in comparison to the EEC target of around R525.

In making such an accusation, I would suggest that Mr Gillam places too much emphasis on what is acceptable, or current practice, in South Africa, and not enough on what the EEC code of conduct for companies with interests in South Africa actually says.

For example, he claims that the minimum wage and accommodation supplied to employees at the Eikeboom colliery should be added to the figure of R198. The British Government's reporting format, on the other hand, is quite specific that, in stating minimum wages, companies should exclude any such benefits in kind, although it does invite them to list them separately if they so wish.

Moreover, the British Government goes on to ask companies to compare their minimum wages with subsistence levels for families of average size. BP makes use, instead, of levels calculated for married men living in hostels, which are very significantly lower. The University of South Africa may recognise this practice, in the sense that it calculates the subsistence levels in question, but there is no support for it anywhere in the EEC code, or in the British Government's explanatory guidance to companies on the subject.

Mr Gillam would seem to be wrong, therefore, to imply that BP has the support of the British Government for its approach to minimum pay in South Africa, and wrong also to imply that BP meets the EEC code's minimum standards.

Peter Webster, 9 Poland Street, W1.

Unleaded petrol

From the Chairman, Campaign for Lead-Free Air
 Sir.—Your article on unleaded petrol (June 24) contained two statements which require further comment.

Britain has not committed itself to adopting the EEC vehicle emissions directive. Despite the recommendations of the House of Lords select committee on the European Communities (environment), the UK Government has thus far refused to accept three-way catalytic converters for vehicles with engine capacities greater than 1 litres.

As far as medium-sized vehicles are concerned (1.4 to 2 litres) the emissions are less stringent, and could be met by leanburn engines fitted with oxidation catalysts. Again, however, the British Government has refused to give any undertaking that this part of the directive will be implemented.

The only part of the directive which will definitely be implemented will be the requirement of new cars to run on unleaded petrol from specified dates (1989 for new models, 1990 for new cars).

The second point concerns the percentage of cars which are already able to run on unleaded petrol at 95 octane.

YESTERDAY'S ANSWERS TO THE FLEET PROBLEM WERE FINE — YESTERDAY.

At a time when an average fleet of one hundred cars and light vans incurs a total annual outlay of close to £400,000, it is surprising that so many businesses are looking for a new present and future way to contain vehicle costs? The problem has a perfect answer — Dial fleet contract hire.

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FINANCIAL TIMES

Monday June 30 1986



THE LEX COLUMN

Summer lightning at Woolworth

As the Woolworth blimp circles above the City of London, the battle for control of the company has been fought more privately than would have seemed possible only three months ago...

Optimistic

The remarkable fact is that Dixons has shown itself willing to pay more than £3 a share for Woolworth, 3 1/2 years after it was floated at an optimistic-looking 75p...

Ramrod

Dixons' proposal - to ram branches of Currys and Dixons into 2m sq. feet of Woolworth's space and develop specialist ranges of home and recreational products...

The Baker plan would prolong the policies that created the debt crisis in the first place, Senator Bradley said. By emphasizing new loans instead of interest rate and debt relief, it created more debt and would increase the already precarious exposure of creditor banks to a possible default.

Under Senator Bradley's plan creditors would negotiate annual relief packages with eligible indebted countries at summits chaired by the president of the World Bank...

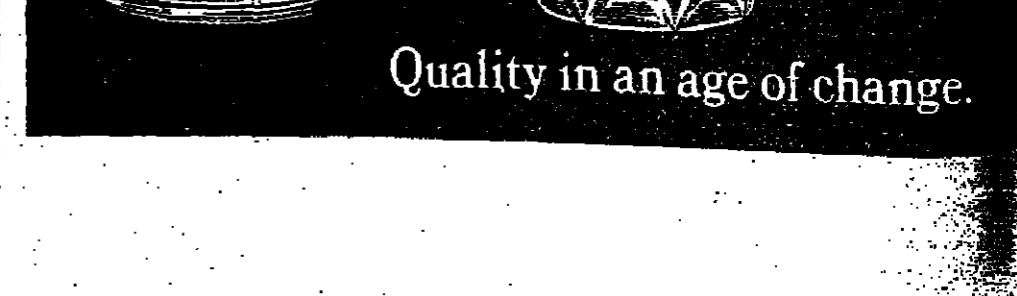
Senator Bradley's suggested goals for the annual relief packages to be offered should be: Three percentage points off interest rates for one year on all outstanding commercial and bilateral loans...

To be eligible for debt relief developing countries would have to agree to liberalise trade, take measures to reverse capital flight and encourage internal investment.

They would also have to pursue policies of economic growth which enjoyed broad domestic political support and keep debt management free from scandal.

Exchange rate volatility, Page 3

Quality in an age of change.



JARUZELSKI TELLS OF PLAN TO FREE SOME POLITICAL PRISONERS

Poland considers partial amnesty

BY CHRISTOPHER SOBINSKI IN WARSAW

THE POLISH authorities are prepared to free some political prisoners because of the waning influence of Solidarity, the outlawed trade union, General Wojciech Jaruzelski, the country's leader, said yesterday.

In the run-up to the Polish Congress, various professional groups criticised the Government for failing to plan for a decisive effort aimed at levelling supply and demand and thus making producers responsive to market forces.

IEA calls for early decisions on expanding nuclear power

BY DAVID MARSH IN PARIS

WESTERN governments will be forced to increase reliance in the 1990s on oil and gas for electricity generation unless they take prompt decisions to build new nuclear or coal-fired power stations, according to the Paris-based International Energy Agency (IEA).

Alternative proposed to Baker debt plan

By William Dufforce in Zurich

A DEBT RELIEF plan that would provide the world's most heavily indebted countries with reduced interest rates, some debt write-down and new lending was put forward yesterday by Senator Bill Bradley...

Opec studies new output sharing plan

Continued from Page 1

They are considered by those agreeing to the new ceiling agreement as not only compatible with worldwide consumption but also with restoring oil prices to a range of \$17 to \$19 barrel by the end of the year.

UK Cabinet to prepare way for early election

BY PETER RIDDELL, POLITICAL EDITOR, IN LONDON

THE BRITISH Government's legislative programme announced in the Queen's Speech to parliament this November will be lighter than in the past three years specifically to provide room for manoeuvre for a possible general election in autumn 1987.

Surprising rise from tobaccos

THE PAST fortnight has seen US fund and institutional investment managers lining up their portfolios for the end of the half year - bringing out the losers, where possible, and making sure that their trustees will find plenty of winners in the stock list.

Table with 4 columns: Company, % above yr low, p/s, P/E Ratio. Rows include RJR Nabisco, PW Morris, US Tobacco.

But a dip of 4.1 per cent in electronics stocks, subdivided into semiconductors and component manufacturers, provided a sharp reminder of the uncertainty still hanging over the high-technology industry.

The rebound in the stocks reflects two separate factors. The cancer liability suits have not yet proved the industry's undoing and the tobacco companies have continued, with great success, to diversify.

R.J.R. Nabisco has undergone a re-rating in the market since its acquisition of Nabisco Brands. Ms Jennifer Coury, of E. F. Hutton, believes the Nabisco deal will prove "only the first of a number of pertinent and sizable additions to R.J.R.'s family."

Morris has another advantage since, despite the federal Government's opposition to its planned sale of Seven-Up to PepsiCo, the board still intends to sell the soft drinks company. Seven-Up is believed to be still a minor loss-maker, but its sale could put around \$500m in Morris' balance-sheet.

With all these prospects ahead, the fact remains that buyers of tobacco shares have been betting heavily on the health liability question. Wall Street turned bullish on the tobacco major in March when the US appeals court ruled that Philip Morris was not required to make its internal files available to liability plaintiffs.

World Weather

Table with 3 columns: Location, Temp, Wind. Lists cities like London, Paris, New York, Tokyo, Sydney, etc.

Cossiga opens crisis talks

Continued from Page 1

authority in a reformed administration. Mr Cossiga, who reserved his position when Mr Cossiga presented his resignation of Friday, will today meet former presidents of the republic, as is the custom, to ask their advice on the crisis. Tomorrow he will receive leaders of all the political parties.

World Weather (continued)

Table with 3 columns: Location, Temp, Wind. Lists cities like Moscow, Beijing, London, etc.

CANADA 2

The economy

Recovery begins to falter

SHADOWS ARE starting to creep across Canada's robust four-year economic recovery.

One of the first signs of trouble last winter was a sudden run on the Canadian dollar which sent the currency plunging from 73 US cents in October to a record low of just over 60 US cents in early February, when massive intervention by Ottawa halted the slide.

Although the steepness of the decline was widely blamed on currency speculators in Chicago, the Canadian dollar's weakness reflected concern at the Federal Government's big budget deficit (equal to more than 6 per cent of gross national product) and the effect of weak oil and commodity prices on a resource-based economy.

Since then there have been other signs that the recovery may be running out of steam. Private sector investment—earlier expected to be one of the main motors of growth in 1985 and 1987—has been disappointingly weak. While business investment grew by 8.5 per cent in real terms last year, the rate is expected to slow to around 3 per cent this year.

Interest rates are still high in real terms and the mood of large sections of Canadian business is dampened by heavy debt burdens. Mr Leo de Bever, head of Chase Econometrics Canada, says that "a lot of industries tend to be very risk-averse."

The country's economic strength is now based mainly on consumer spending and new housing, though some early warning signs are flashing on these fronts too.

Housing starts fell from an annualised 204,000 units in April (seasonally adjusted) to 190,000 in May. Tax increases announced in the Federal Government's February 1986 Budget are expected to squeeze household spending in the coming months.

Any sign of a faltering US economy and a bottoming-out in North American interest rates also do not augur well for Canada. Exports to the US contribute about 40 per cent of Canada's Gross National Product (GNP).

According to the OECD, Canada's real GNP growth rate will slow from 5.6 per cent in the second half of last year to the highest of any industrial country—to 3 per cent between June and December this year. Growth in household spending will slip from 6.7 per cent to 3 per cent at the latest round of tax increases takes its toll. Growth is expected to quicken

again slightly from next summer (1987) as lower oil prices spur new business investment.

Canada's yawning Budget deficit was thrust into the limelight late last year when the US Congress passed the Gramm-Rudman Act, requiring a balanced budget in the US by 1992.

Interest rates in Canada are traditionally between 1 and 2 percentage points higher than US rates, reflecting Ottawa's proportionally bigger debt burden and the disadvantages of a resource-based economy. The credit rating is expected to make its first foray into offshore capital markets later this year.

But the oil price plunge has some significant costs for the Canadian economy as a whole.

appears to be that Canada will enjoy a net benefit.

Setbacks in the oil-producing provinces of Alberta and Saskatchewan, difficult business conditions for suppliers to the energy industry, and lower tax payments by oil and gas producers should be more than offset, so this argument goes, by the stimulus given to energy-consuming industries in Ontario and Quebec province.

Even the immediate impact on western Canada will be softened by heavier deficit spending by provincial governments, Alberta, the only province in Canada with a Triple-A credit rating is expected to make its first foray into offshore capital markets later this year.

Business investment is expected to slow from 8.5 per cent last year to 3 per cent this year. Interest rates are still too high in real terms and many companies are carrying heavy debt burdens.

The lower the price falls the greater those costs become.

The upstream oil and gas industry accounts for more than 10 per cent of total capital investment. Chase Econometrics estimates that at an average oil price of US\$17 a barrel, oil and gas companies will cut their spending from C\$8bn last year to C\$5bn in 1987. Chase predicts a further 20 per cent cut if the price drops to US\$12 a barrel.

Canada is a net energy exporter. The fall in oil prices has thus contributed to a narrowing in the merchandise trade surplus from an annualised C\$16bn in the last three months of 1985 to C\$9.8bn in the first quarter of this year.

The overall terms of trade

have been worsening since the end of 1983. The current account of the balance of payments—which was at record levels in 1984—slipped into deficit last year. Bank of Nova Scotia forecasts that the deficit will more than double to C\$6.5bn this year but will narrow next year as import demand weakens.

In the longer term, low energy prices raise the spectre of rising oil imports as local demand increases but production in Western Canada declines.

The drop in oil prices has not yet had as dramatic an impact on inflation in Canada as it has on other industrial countries. Refiners have widened their profit margins, passing only some of the benefit of lower raw material costs on to consumers, and the decline in the Canadian dollar's hiccup in interest rates earlier this year, higher sales taxes and a jump in housing costs have for the time being offset the benefits of lower oil prices.

Consumer prices are currently rising at an annualised rate of 4 per cent, little changed over the past year.

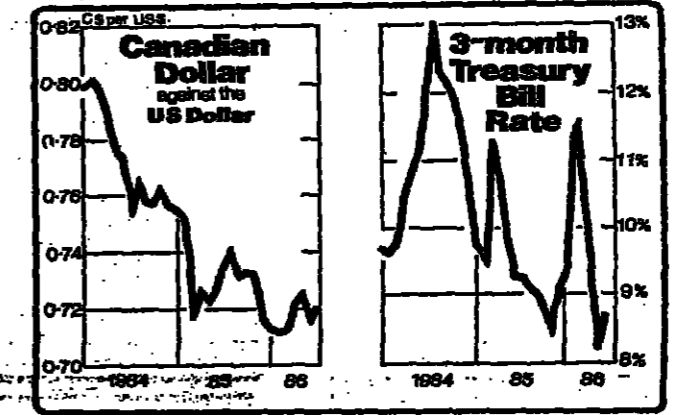
Money may have scope for further growth without any serious risk of unleashing inflationary pressures. Canada's inflation rate is now well above the US rate. That view, though, without official intervention, the outlook for the Canadian dollar remains bearish.

Since Ottawa's determined intervention in the foreign exchange market last February, backed by a C\$1bn foreign bond issue and drawings on standby credit lines, the Canadian dollar has briefly climbed above 73 US cents. But it has begun to slip again in recent months.

Pessimists forecast that the Canadian dollar may drop to 68 cents by the end of 1987. Mr Lloyd Atkinson, Bank of Montreal's chief economist, predicts that political pressures to hold down domestic interest rates in the face of rebounding US rates may bring another depression of the Canadian dollar later this year.

The Bank of Canada has been concerned in the past about the inflationary consequences of a cheaper dollar. Ottawa's present priority appears to be to moderate any decline. According to Mr de Bever at Chase Econometrics, the central bank is unlikely to use interest rates for any prolonged period to protect the exchange rate.

Bernard Simon



Foreign investment

Federal agency gets to work

THE AGENCY Investment Canada, just one-year-old, has some a long way towards convincing foreign investors that the late and unlamented Foreign Investment Review Agency (FIRA) was not a mere protectionist in one of Prime Minister Mulroney's favourite phrases, "open for business."

The new body will support from the provinces and the private sector in more presentations in Europe and Asia this year. It has had encouraging responses from many countries, including West Germany and Japan, says Mr Paul Labbe, IC's president. The change in policy which it represents has helped to win several large foreign-backed projects, but its impact on investment flows is not yet clear.

Investment Canada has not turned down any sizeable foreign investment proposal. But it could be more selective. The British food group Allied-Lyons plan to buy the distilling business of Hiram Walker Resources of Toronto.

Allied-Lyons and the Reichert brothers own Hiram Walker, have begun litigation over the deal. If Allied-Lyons succeeds, it would have to submit the purchase to Investment Canada review. A final decision might be made at Cabinet level.

Investment Canada was born on July 1 1985 after six months of talks between Ottawa and Prime Minister Mulroney. The new Mulroney Government was ready to sell out Canada to foreign business interests. But once the Investment Canada Act was passed, and the new agency replaced FIRA, the sipping ceased.

Investment Canada's mandate is to promote Canada "as a safe and profitable place to invest." Its first task was to change the belief abroad that Canadian investment rules were too restrictive.

It has spread the word that foreign investment is welcome if it creates jobs, improves the country's technological base, increases exports and enhances competitiveness.

Some exceptions remain, including cultural industries such as book, magazine and newspaper publishing, film production and distribution—and financial services, where either Federal or provincial law impose specific ownership limits.

Investment Canada also works closely with the provinces to spread investment across the country. It tries to match the economic strengths of each province with the needs

of individual foreign investors. FIRA came into being in 1974 largely in response to nationalism in Ontario directed at the owners of American branch plants. It was never accepted in the West, in Quebec or in the Atlantic provinces. At the same time, Mr Pierre Trudeau, announced the creation of FIRA, Quebec premier Robert Bourassa was setting a New York business audience that his (mainly French-speaking) province wanted all the foreign investment it could get.

But times changed. Foreign investment too, declined markedly in the aftermath of the 1979 energy crisis, the 1982 recession and the Trudeau government's contentious National Energy Programme. During its last two or three years of its existence, FIRA appeared to have lost its spirit and rubber-stamped almost every application.

Under FIRA's rules, foreign investors had to file detailed information on the nature of Canadian businesses with assets of C\$250,000 or more, or for the creation of any new business in Canada.

In all cases, foreign investors had to show that their proposals would provide "significant" benefit to Canada. The cabinet, which decided on all applications, was not bound to give reasons for its decisions.

Investment Canada retains review powers but in a much narrower and simpler form. Simple notification of proposals is sufficient, and most investments by non-Canadian are not reviewed.

Only acquisitions of Canadian businesses with assets of C\$35m or more are reviewable, as well as indirect acquisitions of Canadian businesses with assets of C\$50m or more stemming from changes in control of the parent company. The minister of regional industrial expansion is now responsible for the review process.

A proposal being reviewed must now merely show "net" benefit to Canada, meaning that it must have a favourable impact on economic activity, allow participation by Canadians, help productivity, competitiveness, and access to markets—but not reduce competition.

Mr Labbe says that the review process has been reduced to about 35 days, except in special circumstances. With the exception of investments in cultural activities, a proposal is automatically deemed to be approved if it

is not rejected within 45 days. The more relaxed policy has ended a long-simmering feud between Ottawa and Inasco, the tobacco, drugstore and financial services group, 44 per cent owned by BAT Industries of the UK. Inasco finally won official status as a Canadian company, enabling it to effect takeovers in Canada without review.

The Liberal Government led by Mr Trudeau maintained that Inasco, though operated by Canadians, was not fully autonomous because of the BAT holding. Under the old FIRA Act, its investments in Canada had to be vetted.

Inasco argued that it could no longer pay the profits of its large tobacco products business in Canada for the benefit of Canadians because the time taken for official review of any diversification move precluded an effective takeover bid.

According to the company, the BAT investment was entirely positive.

Canadian status allowed Inasco to buy Genstar Corporation's services subsidiary, Canada Trust, earlier this year at a cost of around C\$40m. Nonetheless, the Government has placed several restrictions on the deal to discourage Inasco from using Canada Trust to further the interests of its tobacco, drugstore and other businesses.

Investment Canada escaped embarrassment this spring over the sale of Prentice-Hall Canada

to Gulf and Western Industries of the US Gulf and Western took control of the Canadian subsidiary indirectly when it bought Prentice-Hall in the US in December 1984.


The Government came to grips with the case by allowing the acquisition to go through on the grounds that it was made before a restrictive new policy on foreign ownership of book publishing companies was announced.

With foreign-controlled publishers having well over 60 per cent of the Canadian educational book market, the Gulf and Western Prentice-Hall case heightened concern about the future of Canadian book publishing and other cultural industries.

Last July the Government announced a guideline to prevent foreign companies from buying a Canadian publishing company unless they give up control at a fair market value within two years.

Protection of cultural industries remains one of the most sensitive areas of foreign investment and trade policy. It is one of the mainstays of many US book and magazine publishers to expand their Canadian interests, rules for protecting the cultural industries are likely to be one of the most delicate issues in the recently begun free trade negotiations with Washington.

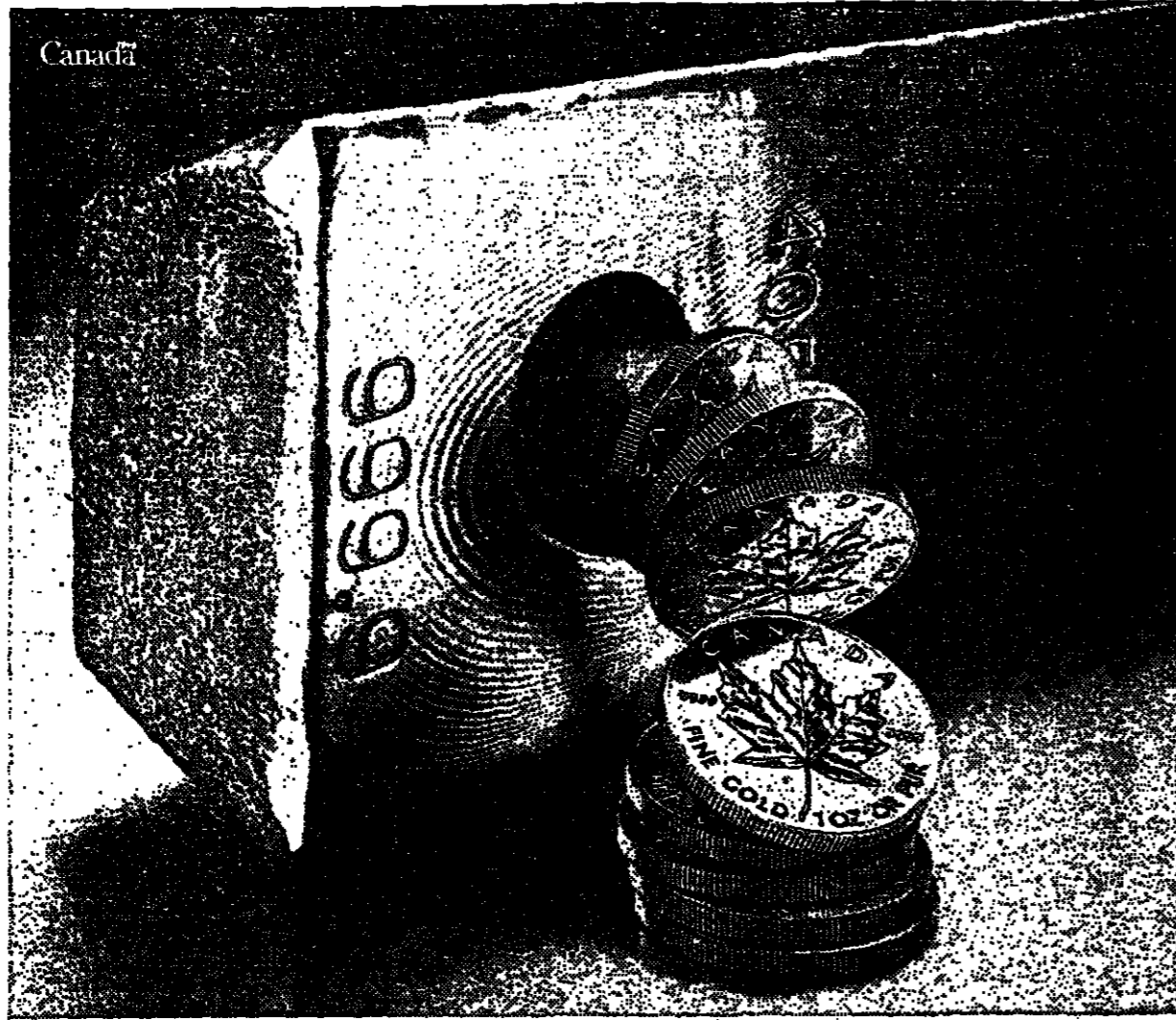
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Mr Michael Wilson, Federal Finance Minister

Finance Minister shows his strength

Profile: Mr Michael Wilson proves himself as one of the main pillars of the Progressive Conservative Government in Ottawa

FINANCE is likely to be one of the few portfolios left untouched by a major Federal cabinet shuffle expected later this summer.

After a shaky start in the early days of the Tory Government, Mr Michael Wilson has become one of Mr Mulroney's most dependable ministers.

Helped by a more assertive style and by the strong economy, Mr Wilson has managed to put behind him the humiliation he suffered last year when he bowed to public and opposition pressure to withdraw budget proposals to de-index old age pensions.

A strong public relations effort—including speeches to trade unionists, patrons of a Nova Scotia art gallery and high school teachers in Newfoundland—enabled him to win public acceptance of the much tougher February 1986 Budget, which included tax increases and public spending cuts.

Mr Wilson's stature was further boosted last May by Canada's admission (with Italy) to the group of five, the informal and occasional meeting of finance ministers of leading industrial countries.

The domestic political spin-offs of inclusion are significant. As Mr Wilson puts it: "People in Canada recognise that we are now in a very important forum of discussion with other finance ministers. That brings with it some responsibilities."

Lower oil revenues have skewed Government finances since the February budget, more than offsetting the benefits of lower interest rates. Mr Wilson says that "we may have to take some action sometime through the year to put that right." A further squeeze

on spending is thus possible.

He says that budget forecast of a 3.7 per cent real gross national product growth rate this year remains within reach, but he is concerned that the advance is not evenly spread. The surging Ontario economy—based on oil-consuming manufacturing industry—may create labour and materials shortages which could ripple through the entire country in the form of higher prices.

"It seems crazy," he says, "that we have one part of the country doing extremely well, and because it's doing so well, may cause problems that other parts are less able to cope with."

Before entering politics eight years ago, Mr Wilson, now 48, worked briefly at two London merchant banks, Morgan Grenfell and Baring Brothers, and was later executive vice president of a leading Toronto securities firm. He was International Trade Minister in the short-lived Conservative Government led by Mr Joe Clark (now Foreign Minister) in 1979-80.

With this background, he has been one of the Mulroney Cabinet's strongest proponents of more market-oriented policies.

Mr Wilson asserts that "we want to open up our markets to a greater extent, expose ourselves more to external forces and toughen up the competitive position of Canadian industry." He applies this philosophy to official exchange rate policy, noting that "we want the dollar to be a reflection of the economic strength of the country." He thus dismisses US concern that Ottawa has deliberately held the Canadian dollar down to improve Canadian competitiveness.

"To the extent that we have taken overt action in the market, it has been to support the dollar rather than to push it down," he says. "My preference would be stability, because that will lead to lower interest rates."

Bernard Simon

Privatisation

Storm over sales of Crown assets

THE MULRONEY Government came to office in 1984 with a commitment to privatise a maze of federally-owned enterprises with assets of more than C\$50bn, accounting for about 5 per cent of gross national product.

Soon the new Conservative Government was pointing to the spectacular success of British Telecom's public stock issue, suggesting it might become a model for privatisation in the name of efficiency and competitiveness in a new world trading environment.

A cabinet committee was formed under Treasury Board chief Robert de Cotret. The US investment bank Salomon Brothers was hired to advise the Government. Former Industry Minister, Mr Sinclair Stevens, became the chief promoter of privatisation across Canada.

Despite a favourable economic climate and the strongest equity markets since the 1978 Energy Crisis, however, the Mulroney Government has found it difficult to maintain the pace of privatisation.

Some projects have been politically risky while others have brought out inter-provincial rivalries or exposed potential conflicts in vital areas of public policy.

Mr Stevens has had to give up his job in the face of a political storm and decisions about the future of Federal Crown corporations have often been delayed again and again, often because of dissension within Government ranks.

Some sales have been completed. Other public corporations have been restructured at the Federal level, a Crown corporation building two national museums in Ottawa was taken into the Public Works Department because cost overruns were getting out of hand. Northern Transportation Company, which moves supplies to Northern and Arctic communities, was sold.

Canadian Arsenals was sold to the Montreal engineering group SNC, which already owned an ammunition maker. The Federal holding in Canada Development Corporation, a pharmaceutical,

R. G. Gibbens

Federal politics

Tories lose favour in polls

THE STORY of the Progressive Conservative Government's first two years in office was summed up in Prime Minister Brian Mulroney's extended trip in May to Japan, China and South Korea.

While the Prime Minister was working hard to cement relations with three of Canada's key trading partners, his achievements were overshadowed at home by a raging controversy over a relatively minor conduct-of-interest allegation involving the Industry Minister, Mr Sinclair Stevens.

A similar pattern has repeated itself several times since the Tories came to office in a landslide election win in September 1984. The Government's mistakes—many of which began as quite minor incidents—loomed larger than its achievements.

The Tories' sagging position in opinion polls is evidence that voters give the Mulroney Government little credit for its efforts to reverse some of the questionable policies pursued by the Liberals, who held office for 21 years with only a brief Tory break in 1979-80.

Those who expected a Thatcher or Reagan-style revolution from a Canadian Conservative Government were bound to be disappointed. Ideology plays little part in voters' loyalties, and governments invariably find that the centre of

the political stage is the safest place to be.

Most Canadian politicians, and Mr Mulroney more than many others, make opinion polls the guiding star of their policies.

Despite these constraints, the Tories have gone some way towards tackling the country's most pressing economic and social issues. In two areas—foreign investment and energy—the Mulroney Government has largely dismantled the nationalistic controls put in place by the Liberals.

Barriers to foreign investment have been significantly lowered. Oil prices have been deregulated, and a start has been made on loosening controls in the transport sector.

Mr Mulroney has taken a considerable political risk by starting free trade talks with Washington (a subject discussed in more detail elsewhere in this survey).

The Tories have also begun gingerly to come to grips with a disconcertingly high budget deficit, albeit by putting the emphasis on higher taxes rather than lower public spending.

Mr Mulroney has so far kept the usually choppy relationship between Ottawa and the 10 provinces on an even keel, despite the emergence of Liberal governments in Ontario, Quebec, and Prince Edward

Island.

The Prime Minister and the new Liberal premier of Quebec, Mr Robert Bourassa, are moving towards delicate negotiations aimed at putting Quebec's signature to the 1982 Federal constitution. Success would enhance the reputations of both men.

Another Liberal premier, Mr David Peterson of Ontario, has expressed reservations about Ottawa's free trade talks with the US. But his reservations have fallen short of outright opposition.

On the liabilities side, the Government has lost four ministers. A fifth resigned but was later reinstated after the police dropped charges of over-spending in the 1984 campaign.

It has suffered several humiliating setbacks, leaving the impression that it is guided not by conviction or principle but by the pressures of opinion polls, media comment and lobby groups.

Several of the five ministers who resigned—including Mr Stevens—did so after their actions had been stoutly defended by Mr Mulroney and other Cabinet colleagues.

The Tories have raised doubts about their future electoral prospects by falling so far to consolidate their support in Quebec, where they unexpectedly swept 59 of 75 con-

stituencies in 1984.

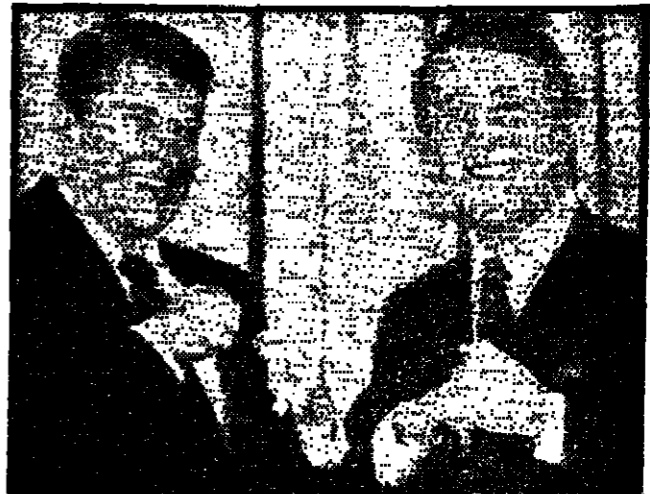
The big Quebec caucus has itself proved unwieldy. A combination of experienced politicians and a large number of newcomers has presented problems ranging from demands for more Cabinet representation to inadequate constituency organisation.

At the same time, Mr Mulroney's apparent preoccupation with his home province—Quebec—demonstrated by favours such as Government subsidies to Montreal's petrochemicals industry and new navigational equipment for remote airports—has irritated caucus members from other parts of Canada.

Mr Mulroney has blamed the Press for many of his problems. While the relatively gentle nature of Canadian politics means that trivial incidents are often blown up into major controversies, the Government might have avoided some setbacks by showing more astuteness in its short-term tactics and longer-term strategy.

The Tories are still less than half way through their five-year mandate, so there is still time to put things right. Before the Sinclair Stevens affair, signs had appeared that the Government was rethinking its tactics.

Cabinet ministers took a firm stand on provincial participation in the free trade talks and stuck



Two North American leaders of Irish ancestry: President Reagan and Mr Brian Mulroney, Prime Minister of Canada

to the February 1986 Budget proposals.

The Government is now examining ways of reopening the debate on the expensive system of universal social programmes. Last year's outcry over a proposal to de-index retirement pensions forced it to retreat from earlier plans to start linking benefits to incomes.

The Tories can draw some comfort from the disarray in which the Federal Liberals (the "Grits," as they are popularly known) find themselves. Their leader, Mr John Turner, who was Prime Minister for two months between the retirement of Mr Pierre Trudeau and the September 1984 election, has

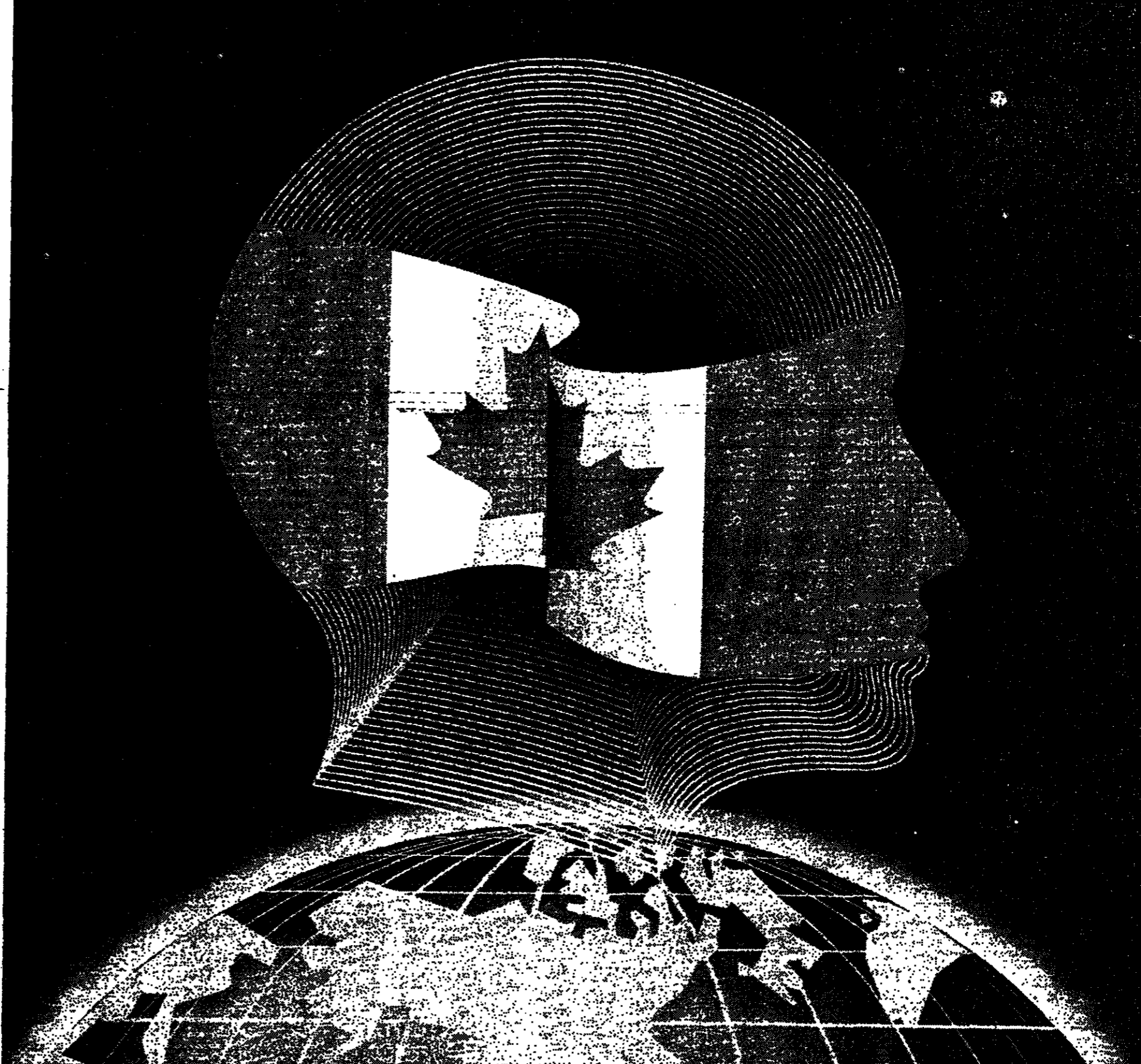
had difficulty building up a loyal following within the Liberal party.

The party as a whole has failed to present a coherent policy on US-Canadian free trade. Some of its leaders support free trade, some oppose it, and others give the impression of not knowing where they stand.

If the Liberals—regarded for most of this century as Canada's "natural ruling party"—are to have a real chance of returning to office in the next election, they will need to clarify their views on free trade.

As things now stand, the trade issue will almost certainly dominate the campaign.

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CANADA 4

Deregulation in banking

Pressures mount for change

Canada's six leading banks*

	Net Income (Cdn)		Return on assets (%)		Loan loss provision (Cdn)	
	1986	1985	1986	1985	1986	1985
Royal	125.1	100.4	0.53	0.45	200.0	157.0
Bank of Montreal	85.1	78.0	0.41	0.41	186.7	183.4
CIBC	74.3	81.3	0.38	0.48	157.0	122.0
Bank of Nova Scotia	80.0	66.0	0.53	0.46	101.4	74.5
Toronto-Dominion	101.4	107.5	0.78	0.71	90.4	63.3
National	44.1	35.5	0.69	0.70	52.1	31.6

* Three months ended April 30.

ment bank Goldman Sachs was opening its first office in Toronto.

Besides unpredictable changes in the regulatory climate, Canadian banks face the challenge of the slump in oil prices. The impact on their 1986 results will be cushioned by a recent decline in interest rates and by the ability of hard-pressed oil and gas producers to meet debt-servicing commitments by selling off assets and other measures to conserve cash. That outlook for 1987 is murkier. A sign of the banks' concern is the 34 per cent increase in loan loss provisions set aside by the six major institutions in the three months to April 30, compared with a year earlier. Provisions are calculated according to a five-year moving average, but most of the banks have raised their estimates of 1986 write-offs. Toronto-Dominion has classified its entire C\$738m exposure to ailing Dome Petroleum as a problem loan. Although energy problems may reduce earnings significantly, even the worst cases considered so far—including the collapse of Dome with debts of C\$6bn—do not endanger the stability of any of the big banks. All have strengthened their capital bases in the past few years and have substantially raised their bad debt provisions.

Bernard Simon

Trade relations with US

Key election issue

WHETHER they succeed or fail, the free trade talks between Ottawa and Washington, which began in May, will have profound economic and political consequences for Canada. Even Prime Minister Mulroney, not normally one to stick his neck out, predicted last month that free trade will be the overriding issue in the next Federal election. Historians will almost certainly judge the Mulroney Government by the success or failure of the talks. Support for a free trade pact with the US has grown in the past few years as many Canadians, especially in the business community, recognise the dangers of being left out of a major trading bloc. Canada's competitiveness in many markets has been eroded over the past 25 years by the formation and expansion of the European Economic

Community and the European Free Trade Association, the system of preferences granted to developing nations and the dismantling of Commonwealth preferences. Meanwhile, the strong recovery of the US economy and the decline of the Canadian dollar against the US currency has contributed to much closer trading links with the US, whose share of Canadian exports rose from 60 per cent in 1980 to 78 per cent last year. The two countries are the world's biggest trading partners, with a two-way trade totaling C\$165bn last year. The recent surge of protectionism in the US has thus accelerated the search for secure markets. Free trade supporters echo the views of Mr William Macdonald, the Bank of Nova Scotia's chief economist: "It would be difficult to exaggerate the risks to Canada of being frozen out of any sizeable free-access market, either in a period of intense international competition and rising protectionist sentiment."

Many Canadians see free trade as a threat rather than an opportunity, however. They fear that Canadian manufacturers will be swamped by bigger, more efficient US producers and that many US companies will close their Canadian plants and concentrate production south of the border. The brewing industry is often cited as a case in point. While provincial regulations have fragmented Canadian beer production among three dozen breweries, the biggest US plants can singlehandedly supply the entire Canadian market. Publishing, broadcasting and other "cultural" industries, which are protected by tax laws and local content requirements, also consider themselves vulnerable. Agriculture is likely to be treated as a special case. It is not clear to what extent services, which make up nearly two-thirds of national output in each country, will be drawn into the process. Costs and benefits of free trade are impossible to gauge in advance. Opponents of being able to point to specific industries—magazine publishing, farm products and textiles, among others—which rely on protection for their well-being. They can easily win sympathy for their case by pointing to potential job losses.

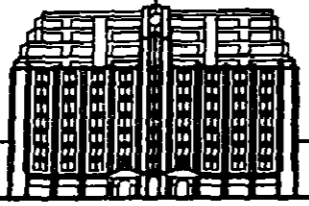
It is more difficult for free trade supporters to single out sectors which would enjoy easier access to the US market, or to console protected industries that the outlook may not be as dark as it now seems. Mr Donald Macdonald, the former Finance Minister who has been one of the most vocal proponents of free trade, has summed up both the opportunities and the dangers by calling free trade a "heap of faith." One sign has put together a 100-strong negotiating team led by Mr Simon Reisman, a tough but highly regarded former deputy minister of finance. The US team is led by Mr Peter Murphy, previously the US trade representative in Geneva. The talks got off to a rocky start. An intense burst of last-minute lobbying by the White House and the Canadians was needed to persuade the US Senate to give the Reagan Administration "fast-track" negotiating authority. By doing so the Senate has agreed not to dabble in the negotiations as they proceed, but simply to approve or reject the final agreement. The day before the trade talks opened in Ottawa, President Reagan angered and embarrassed Mr Mulroney by unexpectedly imposing a 35 per cent import duty on cedar shakes and shingles, two items used in house building. The Canadians subsequently retaliated by raising duties on a number of US products. The US Commerce Department touched another raw Canadian nerve in early June by ordering an investigation into government subsidies on softwood lumber. Canada's fourth-largest export to the US with annual sales of C\$4bn. Canada's share of the US softwood market has soared from 15 per cent to 35 per cent in the past seven years. These skirmishes have inevitably raised questions in Canada whether the US is serious about free trade talks. On the other hand, they have provided clear examples to Canada of the need for secure access to the US market. Significantly, the latest controversies have hardened rather than diluted Mr Mulroney's commitment to free trade; and despite the sudden flare-ups some doubting Thomases, notably Ontario Premier David Peterson, appear to have shifted from outright opposition to a readiness to see what comes out of the talks. Many hurdles must be overcome before a trade pact is drafted, let alone approved by both countries.

Bernard Simon

IV

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OPPORTUNITY

CANADA 5

Regional Profiles

Construction leads upswing

ONTARIO

WHEN OIL prices were at a peak six years ago, the industrial heartland of Ontario stagnated while Alberta reaped the benefits of its oil and gas wells.

Now the roles are reversed, with Ontario enjoying a strong economic upswing.

So strong has activity become that concern is rising that parts of the provincial economy may overheat, with labour and materials shortages causing higher inflation not only in Ontario but in Canada as a whole.

Ontario's output is expected to rise by 4.5 per cent in real terms this year compared to the national average of 3.4 per cent. Unemployment has come down from 9.1 per cent in 1984 to less than 7 per cent.

Construction is especially strong, thanks to a surge in homebuilding and the continuing development of office space despite high vacancy

rates. The Ontario construction industry began picking up in 1984, a year ahead of the rest of the country.

The Canadian Construction Association estimates that construction spending in the province grew by 10 per cent in real terms in 1984 and another 12.5 per cent last year.

Fueled by lower interest rates, higher personal incomes and migration from less fortunate parts of the country, the Toronto housing market has taken off. Prices in some neighbourhoods have climbed by more than a quarter in the past nine months. Housing starts are expected to rise by 5 per cent this year after a 35 per cent jump last year.

The fall in oil prices is one of several bits of good news for Ontario, which accounts for almost half of Canada's manufacturing output. The automotive industry, a mainstay of the manufacturing belt stretching from Ushaw, east of Toronto, to Hamilton in the southwest, has benefited from strong demand in both the US and Canada. Motor manufacturers

directly contribute about 19 per cent of Ontario's industrial output.

Although vehicle sales are now dropping, Ontario business is getting another push from substantial new investments by US and Japanese carmakers.

General Motors, American Motors, Toyota and Honda all have plans for new assembly plants in Ontario. Suzuki and GM are at an advanced stage of negotiations for another sizeable investment.

As in the rest of Canada, however, the upswing is not evenly spread. Some towns which rely heavily on single employers still face difficult times. In Sault Ste Marie for instance, Algoma Steel cut its workforce by 18 per cent earlier this year. The company, Canada's third biggest steelmaker, is a large producer of steel tubes for the oil and gas industry.

Uranium mines in northern Ontario and the province's farmers have also missed the present wave of prosperity. The burgeoning economy has been a boon for Ontario's new

Liberal government, which took office a year ago after 42 years of unbroken Conservative rule in the province. But it is by no means the only reason for the Liberals' growing popularity.

The new premier, Mr David Peterson, has also shown himself to be an astute politician. He has been less compromising and more interventionist than his Tory predecessors but he has chosen carefully the issues on which to take a stand.

While expressing reservations about the Federal Government's free trade talks with the US, the Ontario premier has so far been careful not to put himself in a position where he can be accused of scuppering an initiative which may bring substantial advantages to less fortunate parts of Canada and perhaps even the long-term benefits to Ontario.

Free trade supporters have reminded him that Washington now has the right to terminate the 1985 automotive trade agreement — which more than anything else has stimulated the Ontario motor industry — on one year's notice.

On the other hand, the Peterson government has provoked several political controversies where its opponents have been special interest lobbies with little popular support. It has upset lawyers by abolishing Queen's Counsel appointments and it annoyed many business people by imposing strict new anti-pollution controls.

One of the Liberals' most contentious measures is a proposal to ban Ontario's 15,000 doctors from "extra billing" — in other words, charging patients higher fees than the rates paid by the provincial health insurance scheme.

Bernard Simon

Canada's ten provinces — economic output

	1985 share	per cent change					
		1982	1983	1984	1985	1986	1987
ATLANTIC CANADA	5.6	-4.1	4.1	5.3	2.7	1.9	2.0
Newfoundland	1.2	-8.9	2.9	2.1	2.2	1.4	2.0
Prince Edward Island	0.3	-1.7	4.6	5.2	2.2	2.5	2.2
Nova Scotia	2.4	3.3	2.3	7.2	3.2	2.0	2.1
New Brunswick	1.7	-2.0	4.7	4.9	2.4	1.9	2.1
CENTRAL CANADA	67.9	-4.6	3.8	5.9	5.0	4.4	4.4
Quebec	22.9	-4.9	2.8	5.1	4.0	3.5	3.9
Ontario	41.1	-3.7	1.9	5.3	4.9	3.5	3.7
Manitoba	3.9	-3.7	1.9	5.3	4.9	3.5	3.7
WESTERN CANADA	28.5	-4.2	-0.1	2.6	4.9	1.8	0.6
Saskatchewan	3.6	1.7	2.4	1.4	1.6	1.6	1.6
Alberta	11.1	-3.8	-2.9	2.1	4.5	-0.7	-2.6
British Columbia	11.8	-6.2	2.0	3.6	3.7	4.3	3.4
CANADA	100.0	-4.3	2.7	4.9	4.5	3.5	3.4

Source: Bank of Nova Scotia.

Liberal put separatism on ice

QUEBEC

A NEWLY confident Québec province has put aside the independence issue and is again taking its place in the North American mainstream.

The province came under new political management last December when the Québec Liberals under Mr Robert Bourassa swept back to power with more than 50 per cent of the key Francophone vote and 98 of the Assembly's 122 seats.

The separatist coalition led by Mr René Lévesque, the Parti Québécois, had been in power for nine years. But the party had lost the support of Québec youth and of the big unions. Its organisation was in disarray, and the independence from Canada had waned. Even the fight with Ottawa for more provincial powers had become tiresome after Mr Pierre Trudeau ceased to be Federal Prime Minister in 1984.

Public opinion moved decisively towards the more pragmatic approach of the Québec Liberals and their more coherent economic policy. Voters had clearly had enough of bickering over language differences and the signs in Montreal, high taxes, pervasive government intervention and truculent unions.

The Québecois wanted to get on with building a stronger and more diversified provincial economy, emphasising technology productivity and the creation of new wealth. The last time unemployment was below 10 per cent was in the early 1970s, when the first Bourassa government started the C\$1.5-billion James Bay hydro-electric project.

Already tensions have eased. The Francophones, who make up 80 per cent of the province's population of 6m, feel less isolated, while the Anglophones are relieved that the issue of separation has been put on ice.



French has become the everyday language of work and of business in Montreal, and the exodus of Anglophones and head offices to Toronto is over. Tourists are flocking in from the US, Europe and Asia.

The Parti Québécois, led by Mr Pierre Marc Johnson, is marshalling its remaining forces, temporarily exploiting indignation about English language street signs in Montreal, but really searching for a new programme which involves something more than an updated version of the fervent provincialism of the 1960s. On the independence issue it tends to waffle.

Many hardcore Parti Québécois separatists in the PQ coalition defected before last December's election as Mr Johnson deftly tried to steer the party away from its commitment to independence. This group is now coalescing around the new Rassemblement Démocratique pour l'Indépendance, but without the support of several

former Parti Québécois ministers. Though lacking an experienced leader, the Rassemblement wants to become reorganised political party next year.

The Bourassa Government in Québec has moved swiftly to cut personal taxes nearer to the Ontario levels while increasing consumption taxes to compensate. Together with around C\$1bn in public sector spending cuts, it hopes to hold the budget deficit to C\$3bn and retain the province's high credit ratings.

It has moved to accept the "Canada Clause" in the federal constitution, allowing English-speaking children from other provinces to attend publicly-financed English-language schools even though their parents were not educated in English schools in Québec. More than 1,000 children of Italian parents now attend English-language schools in Montreal which will be allowed to stay.

Once a key court decision is handed down, the government will move away from the extreme restrictiveness of Bill 101, the PQ's French Language Charter. It is expected to allow street signs in French and English in Montreal as long as French has precedence.

Prime Minister Brian Mulroney and Federal Liberal leader Mr John Turner in Ottawa say they want Québec to sign the 1982 federal constitution within two years or before the next Federal election. Québec has laid out its demands: its recognition in the Constitution as a distinct society within Canada; more powers over immigration; restoration of a veto on constitutional change; a say in naming Supreme Court judges; limits on Federal spending powers in the province; and financial compensation when it opts out of Federal programmes.

In 1981 Mr Trudeau, supported by the other nine provinces, refused Québec's demand for special status. As a result of the manoeuvring, Québec bargained away its veto and then refused to sign the Constitution. But both Mr Mulroney and Mr Turner have committed themselves in principle to accept most of Québec's demands, responding in part to wings in their own popularity in Québec and in part trying

to win over the Québec "nationalist" lobby.

Ontario and the other provinces have always opposed special status for Québec, saying all provinces should enjoy equal rights and powers. Whether the new Liberal Government in Ontario, trying to speed provision of French schooling and other services to its Francophone minority, could compromise is not yet clear.

The economy of Québec is growing at 3 per cent a year in real terms, with lower interest rates, a fairly solid francophone managers and executives who are now running the private sector and are also represented in the Bourassa cabinet. They are developing the financial services sector swiftly with an eye on national and international expansion.

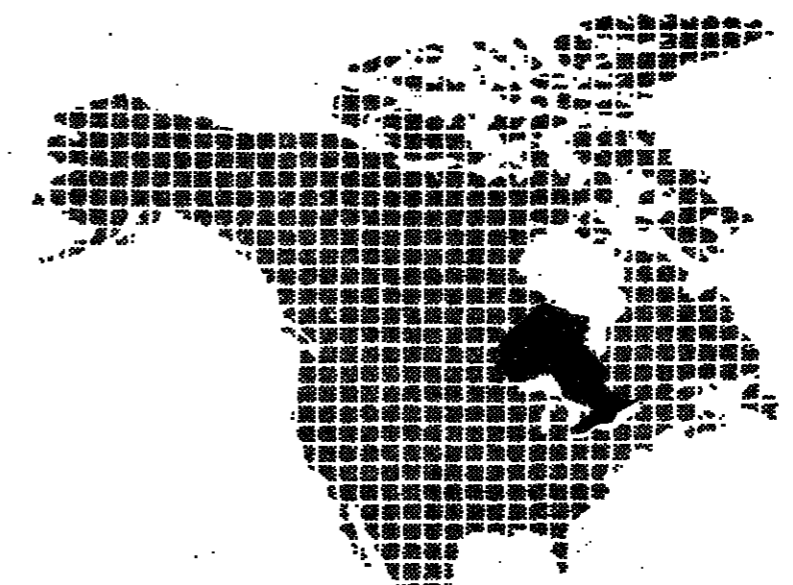
Many have started new businesses in manufacturing and the service sectors or have acquired sizeable companies through leveraged buyouts. The Montreal Stock Exchange has listed about 50 of these companies in the past 15 months with the help of a tax provision allowing Québec residents to deduct up to 75 per cent of the cost of purchasing newly-issued shares within certain limits.

The Bourassa Government wants to use this new spirit of enterprise to achieve a healthier balance between the public and private sectors and maintain economic growth so that Québec can reduce consumption taxes and be more competitive with its powerful neighbour Ontario.

It wants to privatise a dozen Crown corporations (but not Hydro-Québec, the largest), to restructure the old industrial economies of Montreal, Québec City, Trois Rivières and other larger towns, to increase exports of manufactured goods, and later to make a start on the second phase of James Bay based on power contracts with Ontario and the US.

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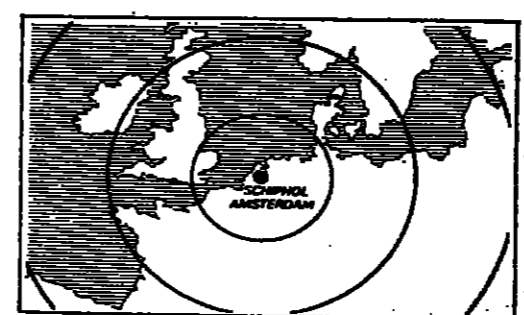


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CANADA 6

Exodus as oil profits collapse

THE WEST

WHEN Prince Charles and Princess Diana charmed their way through Expo '88 in Vancouver last May they were joining in a celebration of the brightest spot in western Canada's generally dismal economy.

While Expo organizers welcome the world to a fair which will generate close to C\$2.5bn for British Columbia, developments in international trade have left some of that province's lumber mills lying idle, shut down oil wells in Alberta and Manitoba farmers to live at the mercy of their bankers.

Another irony is that as tourist stocks rose to Expo, so many as 90,000 western Canadians could head east this year in a search for jobs. Many are oil workers who earned good money in the oil boom of the late-1970s and early-1980s when world crude prices soared. Close to 15,000 people have been laid off since prices began tumbling late last year.

The determination of Arab nations to force Britain and Norway into production cuts has badly hurt Canadian oil producers, who are going through their first year without government price controls.

First-quarter profits of most Canadian oil producers fell by 30 to 70 per cent. Many important projects have been called off or curtailed as oil companies, losing an estimated C\$10bn in revenue this year, cut everything from well drilling (down 60 per cent from last year) to office staff.

This is bad news for men like David Keller, a 34-year-old Calgary welder. He has spent two years travelling across Canada looking for work, often sleeping in his car because he cannot afford hotel prices.

"I was born and raised in the west and I want to stay here," he said. "But when 2,400 guys apply for 24 jobs with the Calgary fire department, where do you find any work?"

James Vertoch, a long-distance trucker, watched the last of his four sons leave Alberta in the fall. He refused

to budge. But when his employer took a paid job this spring Mr Vertoch saw the writing on the wall and prepared to move from Calgary to Vancouver, where he found work.

"My smart move is to get out now before it gets rougher," he said.

The oil price collapse could not have come at a worse time for Alberta's economy, which last year had begun to recover from a deep recession.

The province's farming and coal mining are also in the doldrums. Northland Bank and Canadian Commercial Bank, the only two banks based in Alberta, failed last September.

Like the oil workers, farmers in Saskatchewan, Manitoba and Alberta enjoyed boom days when world grain shortages sent wheat prices up to C\$6 a bushel. Men like Joe Tarasoff thought the early 1980s were a good time to set their sons up in farming. They borrowed heavily and farm debt across Canada rose from C\$5bn in 1975 to C\$22.4bn in 1985, according to the Federal Department of Agriculture.

Now, two years of drought and far too many grasshoppers have left Mr Tarasoff and his son David wondering how to pay Joe. Their land in eastern Alberta, "where we bought this section (640 acres), wheat was

C\$5.80 a bushel. Now it's C\$3.54," said David Tarasoff.

Canadian farmers are caught in the US-EEC "wheat war," which has sent world grain prices plummeting. Prairie farmers have already been told that this year's initial price for wheat will be 19 per cent lower than last year's. Then profits last year fell more than 55 per cent to about C\$1.2bn.

The problem of depressed grain farming is most acute in Saskatchewan, where 40 per cent of Canada's agricultural land is located. When farmers cut back on fertilizers last year, potash prices plunged.

The Potash Corporation of Saskatchewan, which mines and sells potash, lost C\$83.7m last year. The Canadian fertilizer industry went from a C\$148m profit in 1984 to a C\$19.6m loss in 1985.

International trade depressed have also hit the lumber industry, the main force in British Columbia's economy. In May, while politicians debated a free trade relationship between Canada and the US, Washington announced a 35 per cent tariff on cedar shingle imports. Washington has subsequently ordered an investigation into Canadian subsidies on softwood lumber.

David Whitt, vice-president of Port Hardy Forest Products

in Vancouver Island, immediately laid off all 80 of his wood-cutters as orders for cedar dropped. He predicts that as many as 8,000 Canadians could be out of work unless both governments act to prevent a timber trade war.

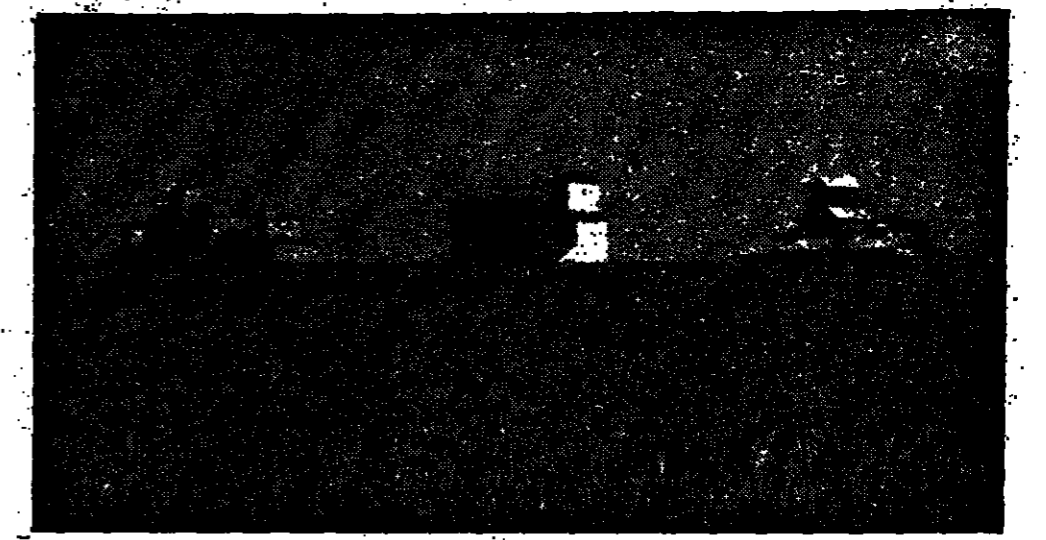
Despite this setback, British Columbian forest products generally have done well this year. Plywood and pulp markets have strengthened and demand for lumber used in housing has increased as Canadian and US interest rates declined.

The governments of all the western provinces are under pressure to give further tax concessions to the oil, lumber and mining industries and a C\$1bn subsidy programme for farmers to help them to weather world trade storms.

Attempts at economic diversification has prompted the formation of some small businesses. Tourist dollars (US as well as Canadian) from Expo '88 and the 1988 Winter Olympics in Calgary are all-important economic stimuli.

But until western Canada can create a more varied economy, the last that not long ago thrived on the idea that "big is better" must learn to live with less.

Janet Moffatt and Kevin Cox



Wheatfields on the Saskatchewan prairie, where falling grain prices have put many farmers in debt

Poor Sisters hedge their bets

ATLANTIC

LESS THAN two years after voting heavily for Brian Mulroney's Federal Conservatives, Canada's four Atlantic provinces (the Maritimes and Newfoundland) have begun hedging their bets with a strong swing to the Liberals in provincial politics.

In April, voters in Prince Edward Island, the smallest of Canada's 10 provinces, turned out Premier Jim Lee's seven-year-old Tory administration and Joe Ghis, son of a Lebanese immigrant, became the first Canadian premier with a non-European background.

In New Brunswick, Richard Hatfield, Canada's longest-serving premier, seems unlikely to last on beyond the next election, expected within a year. His popularity has never recovered from prolonged allegations of drug use and free use of a government aircraft.

Hatfield stood trial for drug possession two years ago, after police found a small quantity of marijuana in his suitcase while checking luggage during a tour of the province by the Queen. He was acquitted.

The Atlantic provinces' remaining pair of Conservative premiers, John Buchanan of Nova Scotia and Brian Peckford of Newfoundland, have also

been buffeted by recent events. But both have at least two more years before they must face the voters.

The Nova Scotia legislature recently adjourned after a four-month session in which several ministers came under relentless criticism from the Liberals and three New Democrats for their handling of environmental issues, the provincial deficit, patronage appointments, and charges of political interference with the judicial process.

In Newfoundland, Premier Peckford has been locked in an acrimonious battle with the province's public-sector trade unions. An illegal strike by 5,500 transport, public works and general service workers ended on April 6, when the two sides signed a back-to-work agreement which included sweeping concessions by the government.

The union has since accused the Newfoundland provincial government of reneging on its promises and has threatened to renew its strike in early September, this time with the active support of 5,500 other workers, including hospital employees.

This political ferment takes place against a background of continuing economic disappointment in the region.

Traditionally the poor sisters of the Canadian Confederation,

the Atlantic provinces have been largely left behind by the economic renewal that followed Mr Mulroney's election in 1984.

Falling oil prices have scotched hopes for an economic renewal driven by offshore oil and gas. A minor exploration boom off the shores of Newfoundland and Nova Scotia has all but petered out. Less generous Federal Government incentives and poor drilling results have contributed to the decline.

Two prospective developments by Mobil Canada, the Ventura gas field off Nova Scotia and the Hibernia oilfield off Newfoundland, have been plagued by disappointing delineation wells. Hibernia seems likely to proceed when and if oil prices rebound, but chances of production from Ventura seem remote before 1999.

The one bright spot is Atlantic fishing, which has rebounded sharply after years of turmoil culminating in the bankruptcy and reorganization (with massive government assistance) of several large offshore fisheries.

The restructured companies now have healthy balance sheets, helped largely by the depreciation of the Canadian dollar against the US dollar and European currencies. Fisheries trade disputes with the US loom as a serious potential problem, however.

Atlantic Canadians have tradi-

tionally viewed free trade with the US, and New England in particular, as a recipe for economic salvation. But, this fervour has ebbed somewhat since the Mulroney government in Ottawa launched its free trade initiative.

Unemployment in Atlantic Canada remains high, ranging from 14.4 per cent in Nova Scotia to 22.2 per cent in Newfoundland.

Per capita annual incomes for the four provinces are: Nova Scotia C\$1,700; New Brunswick C\$1,700; PEI C\$1,800; Newfoundland C\$9,700 — are also well below the Canadian national average of around C\$4,400.

Generous tax incentives aimed at encouraging private sector solutions for Cape Breton's chronic economic stagnation have begun to show results, albeit modest ones.

Magna International, a Toronto-based motor parts manufacturer, plans to put up two plants in the island employing 250 people. Factories to process lobster and make advanced mining equipment are also on the drawing boards.

These projects have brought a flicker of light to the most depressed areas of Atlantic Canada. In other regions, however, the hopes that were raised earlier by oil and gas discoveries are now fading.

Parker Barrs Donham

Edging towards equal status

FAR NORTH

WHEN Canadians talk of "heading north" they usually mean the vacation resort areas near Montreal, Toronto, Winnipeg or Vancouver.

The 80 per cent of Canadians who live within 200 miles of the US border, seldom take account of the vast area of their country beyond that, stretching to within 430 miles or so of the North Pole.

Southerners are often criticised for regarding the Far North as a remote depository of oil, metals and furs, but doing little to integrate its economy and its people into the rest of Canada.

The search for the Northwest Passage, the Yukon gold rush and, most recently, the prospect of oil and gas discoveries in the high Arctic are among the few episodes in the past two centuries which have left a lasting impression in the north.

Nonetheless, the economic, military and political importance of the Far North is growing. The population of Yellowknife, biggest town in the Northwest Territories, has more than doubled in the past decade to 11,000.

The Far North sprang into prominence again last summer when Washington angered Ottawa by sending an icebreaker ship through a part of the North-West Passage over

which Canada has asserted sovereignty.

Even tourists are taking a greater interest in the north. While spotting visiting native artists or admiring unusual scenery, the region offers an absorbing holiday.

The Yukon and the North West Territories (NWT) are slowly edging towards equal status with Canada's 10 federal provinces. Chairmanship of the NWT's executive council, or Cabinet, was transferred earlier this year from the Territory's commissioner, a Federal civil servant, to the government leader, an elected official.

The executive council has also taken over all the commissioner's duties.

Further constitutional progress is being held up by extensive land ownership and mineral rights claims by the Territories' Indian and Inuit (Eskimo) inhabitants. The claims stem partly from treaties signed earlier this century which assigned 14 sq miles to each family.

Some groups, notably the Dene Indians who live below the Western Arctic treeline, are claiming more.

In addition, residents of the Eastern Arctic, including Baffin Island, are pressing for the NWT to be split in two. This proposal is complicated by Dene claims that they would be in a minority to whites in the new western region. Native people outnumber whites by about

three to two in the existing NWT.

Mr John Parker, the NWT's general commissioner, predicts that the split may be achieved within a few years, but that it could be a decade or more before the Territories gain full provincial status.

The drop in the oil price and charges introduced by Ottawa last year to frontier exploration incentives have cast a shadow over the North's economic development. These setbacks came just as the long search for offshore oil and gas reserves in the Beaufort Sea seemed to be succeeding.

Encouraging results from a Gulf Canada well drilled earlier this year have raised hopes of commercially viable deposits.

Pan-Arctic Oils of Calgary, which has spent C\$750m on Arctic exploration in the past 18 years, demonstrated its ability to overcome the rigours of the Far North last August by sending a symbolic 100,000-barrel shipment to Montreal from its small development in Cameron Island in the Arctic.

The Pan-Arctic Oils project and the massive grants handed out by Ottawa to encourage Arctic exploration illustrate that the market economy has only a limited bearing on the development of the North.

The NWT and Yukon administrations still depend on transfers from the Federal Government for about two-thirds of their revenues.

Generous government aid from Ottawa has prompted the

re-opening of the Cyprus Anvil zinc mine in the Yukon. Jobs and other economic activity provided by the mine clearly outweighs the over-supply of zinc on world markets.

Military activities have played an important part in opening up the North. An increase in the number of Soviet cruise missile carriers and sightings of Russian submarines off the Arctic coast have spurred the US and Canada to modernise their northern defences in terms of the recently renewed North American Aerospace Defence Agreement (NORAD).

Construction starts this summer on a new Northern Warning System (NWS), whose Canadian component will include 11 long-range and 36 unmanned short-range radar stations from Labrador to Alaska. The new system is expected to be in place by 1991-92.

Six new fighter aircraft are also being built at a cost of between C\$100m and C\$200m.

The sparsely populated Canadian Arctic, with a land and fresh water area of 3.5m square km, is a useful training ground for Nato forces.

In an effort to prevent further challenges to its sovereignty over Arctic waters, Ottawa plans to build a new icebreaker ship capable of year-round Arctic patrols. It is also drawing formal boundaries around the vast Arctic archipelago.

Bernard Simon

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FINANCIAL TIMES SURVEY

Canada

The next few years will reveal whether 25m Canadians can sustain their enviable living standards, high degree of public order and civilised way of life into the 21st century.

Prosperity put to test

AS CANADIANS start their summer holidays this month, most will find little to disturb their sense of calm well-being.

The threat of terrorist bombings in Europe and violence in Lebanon and South Africa will seem far removed as they enjoy tranquil evenings at their lakeside cottages or the high-tech wonders of the Expo '86 world fair in the spectacular setting of Vancouver.

US tourists are streaming in to Canada in record numbers this summer.

On the economic front, many Canadians who have been out of work in the past five years are now sharing in one of the strongest recoveries among industrial countries, as unemployment drops towards 9 per cent from 11 per cent two years ago.

Inflation is low. Interest rates have been coming down, sparking a strong upswing in the housing market in some cities. Even those Canadians still without jobs can take comfort from one of the world's most generous social security systems.

Beneath the quiet prosperity, however, this most civilised of societies is entering a testing period. Developments on a number of fronts are converging to play a crucial part over the next few years in determining whether Canadians can sustain their enviable living standards into the 21st century.

These emerging forces will profoundly influence Canada's competitiveness in world markets and will determine the extent to which the disparate regions and cultures of this vast country—in area the second largest in the world after the Soviet Union—can pull together for the benefit of the nation as a whole.

Prime Minister Brian Mulroney, whose first 20 months in office have been marred by vacillation on some big issues and political embarrassments on small ones, raised the political temperature by his un-

characteristically bold decision last September to launch talks on a free trade agreement with the US.

The free trade talks, which began formally in May, are likely to continue for at least 18 months (and probably much longer). Conceived as a far-sighted effort to gain secure access for Canadian goods in the US in the face of growing US protectionism, the free trade initiative has far-reaching implications for Canadian society as a whole.

Free trade raises such questions as the future direction of a resource-based economy, the preservation of Canadian culture and even for some the sovereignty of Canadian political institutions.

If it becomes a reality, free trade could have an important bearing on Canadian labour productivity, taxes and industrial strategy.

Although Canada is the world's second biggest country

and the seventh biggest economy in terms of output, it is inextricably tied to the US. US companies provide 80 per cent of all foreign investment and Americans buy 78 per cent of Canada's exports. Canadian interest rates generally follow with US trends.

Canadians spend 70 per cent of their television time tuned into US stations. Three of every four books they read are published outside the country, mostly in the US.

Mr Donald Campbell, chairman of Maclean Hunter, a leading Canadian communications company, recently equated Canadians' concern to preserve their "cultural identity" with Americans' view of their "national security."

As a result, Canadian governments take an unusually close interest in the well-being of cultural industries. Subsidies for film producers, local content requirements for radio and TV, and tax deductions for advertising in Canadian magazines are among the tools used to nurture Canadian culture.

Washington wants these protectionist measures to be on the negotiating table.

Canadians have a love-hate relationship with their southern neighbours. Most of them recognise that being close to the most powerful economy on earth brings special benefits. For example, the integration of the two countries' motor industries since the signing of an automotive trade agreement in 1985 has proved a boon to Ontario and Quebec.

Canadian and US teams play in the same baseball and ice hockey leagues. The US has given many Canadian students, managers and professionals an opportunity to broaden their horizons without moving far from home or having to endure a severe culture shock.

On the other hand, Canadians take justifiable pride in some of the differences between the two societies: their lower crime rate, their cleaner and safer cities, their less competitive work ethic, their greater sensitivity to such issues as disarmament, the environment and the problems of Third World development.

The free trade debate is complicated by disparities between Canada's 10 far-flung provinces. For the resource-based economies of Saskatchewan, Alberta and British Columbia in the west and the Atlantic provinces in the east, lower trade barriers raise the prospect of easier access for lumber, fish and farm products to the US market.

Inhabitants of these provinces would gain by importing manufactured goods from the south rather than having to pay high transport costs to bring them from the factories of Ontario and Quebec.

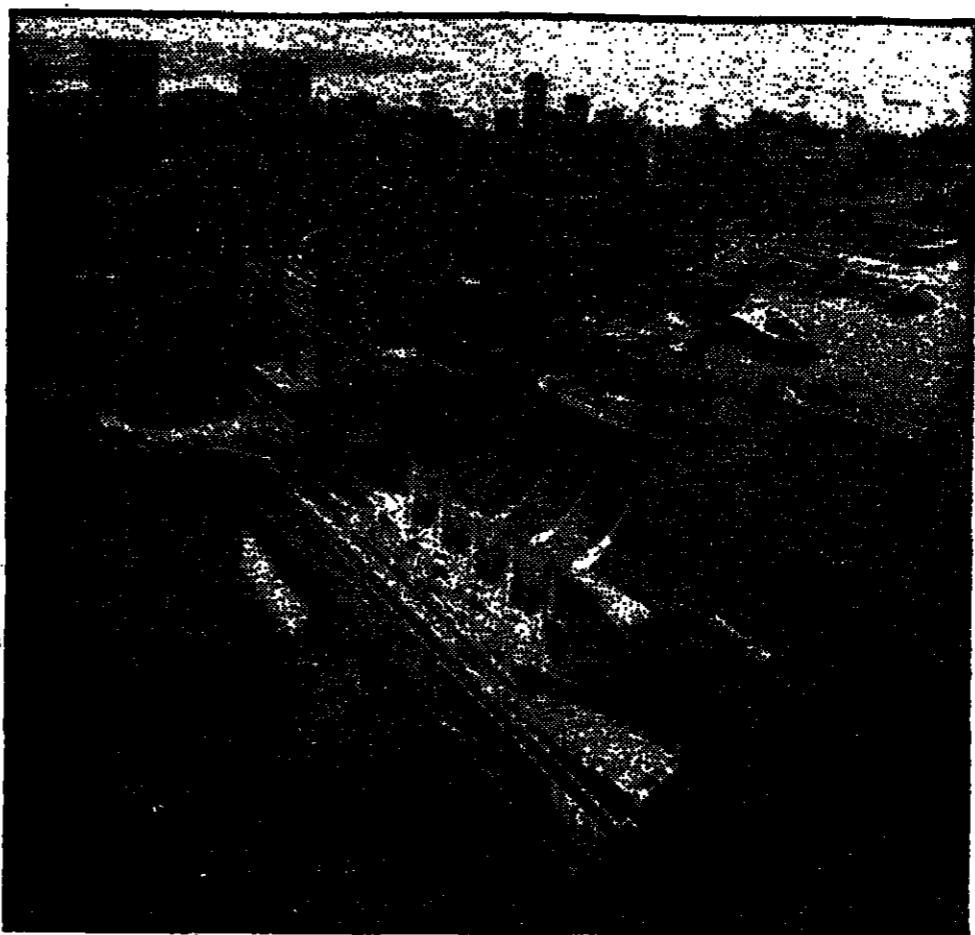
On the other hand, the conventional wisdom is that, with a free trade pact in place, central Canada's manufacturing industries would be swamped by US goods and many US investors would close their Canadian branch plants to supply their northern markets from big, efficient factories in the US.

Trade unions, worried about the impact on jobs, are in the forefront of the fight against free trade.

The sudden fall in world oil and grain prices has brought a new dimension to these regional priorities. While Canada's overall GNP is expected to grow by 3.4 per cent this year and by 2.3 per cent in 1987, oil-producing Alberta and the wheat-producing prairie provinces are in serious trouble.

Alberta's economy, which was on the brink of a healthy recovery this time last year, is now expected to shrink by 2 per cent in real terms in 1988. The number of oil rigs operating in western Canada has shrunk from 300 to 100.

Furthermore, prospects of developing high-cost oil and gas fields off the coast of Nova Scotia and Newfoundland have receded into the far distant future.



The Canadian Pavilion at the Expo 86 World Fair in Vancouver

Unemployment in these less fortunate parts of the country—already well into double digits—is now rising. Canadian oil producers, still burdened by the heavy debt which they took on to finance expansion in the heavy 1970s, face a severe financial crunch in 1987.

Low energy prices are a boon for the energy-consuming industrial provinces of Ontario and— to a lesser extent—Quebec. Ontario's growth rate will come close to 5 per cent this year and its unemployment rate should drop below 5 per cent.

The widening gap between the haves and have-nots creates the potential for rising political tensions, as it did when the roles were reversed during the Opec-led oil boom of the late 1970s and early 1980s.

At that time, former prime minister Pierre Trudeau made bitter enemies of the oil com-

panies and western Canadians in general by artificially holding down domestic oil prices, raising taxes on energy producers and providing generous government handouts to encourage exploration in the Arctic and off the East Coast at the expense of the west.

In 1986, the boot is on the other foot. Ottawa began dismantling the Trudeau National Energy Programme last year before the oil price plummeted, but pressure is now growing on the Federal Government to do more.

Mr Howard Macdonald, chairman of Dome Petroleum, Canada's biggest independent oil and gas producer which has amassed debts of C\$6bn, warned recently that "government action has so far been modest in comparison to the size of the problem." Prairie grain farmers are pressing for more financial aid.

Ontario and Quebec may also be expected to make sacrifices for the sake of their less fortunate countrymen in the west and east. Some observers already see a link between mounting restiveness in the west and Ontario Premier David Peterson's less strident opposition in recent months to the free trade initiative.

Optimists predicted a new era of federal-provincial goodwill when Mr Mulroney's Progressive Conservative party came to office in a landslide election victory in September 1984 after more than two decades of almost unbroken Liberal rule in Ottawa.

At the same time, no fewer than eight of the 10 provincial governments were in Conservative hands. In Quebec Mr René Lévesque's Parti Québécois was eager to boost its sagging popularity by forging closer links with Ottawa. Only Manitoba,

governed by the mildly socialist New Democratic Party, appeared to be out of the fold.

The line-up of both parties and personalities in provincial politics has changed dramatically in the past year. Ontario's tired Tory dynasty, in office for 42 years, has been replaced by the vigorous Liberal administration of Mr David Peterson who is rapidly carving a reputation as one of the shrewdest politicians in Canada. Liberals have also taken over in Quebec and Prince Edward Island.

Alberta's Tories face a re-vitalised opposition after recent elections. The Tories are also expected to lose ground (and perhaps the reins of power) in elections expected within the next year in Saskatchewan and New Brunswick.

These shifts, coinciding as they do with unsettling economic trends, will complicate Mr Mulroney's task of forging a national consensus on free trade. They raise the risk that some of the provincial governments will become even more inward-looking than they usually are, more determined than ever to put their own interests above those of the country as a whole.

Even so, Quebec's recent experience shows that changes can create opportunities too. Conciliatory statements by Federal Prime Minister Brian Mulroney and the new Liberal premier Mr Robert Bourassa have lifted hopes that Canada's largest (in area) and only predominantly Francophone province can again become a full member of the confederation by signing the 1982 Constitution.

Mr Lévesque refused to sign after other provincial premiers turned down his demands for a Quebec veto on constitutional changes. Formal negotiations are likely to be reopened soon.

After more than a decade of growing government intervention in the economy, Quebec is now a pace-setter in privatising state corporations and deregulating financial services.

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EUROPEAN HIGH TECHNOLOGY 2

Semiconductors

Striving to regain ground

DURING THE past 18 months one of the steepest and most brutal downturns in the history of the semiconductor industry has forced many US and some Japanese suppliers to retrench in the face of collapsing product prices and mounting losses.

Yet in Western Europe much of the recent emphasis has been on continued expansion. A number of established electronics groups have ploughed ahead with substantial investments intended to strengthen their market position in semiconductors, while several new companies have also been formed to enter the business. Among recent developments are:

- Siemens of West Germany and Philips of the Netherlands, Europe's two largest electronics companies, are committing almost \$1bn to Megaproject, a four-year joint research programme designed to match Japan's leadership in advanced memory chip technology.
- Thomson, the French state-owned electronics group, is pressing ahead with ambitious plans to grab a share of the world market for mass-produced "standard" microchips. Last year it acquired a US base by buying from United Technologies many of the assets of Mostek, a leading Silicon Valley company which had plunged deeply into loss-making custom chips.

- SGS-ATES, part of the Italian state-owned Stet group, is in the midst of an aggressive international expansion effort and last year began mass production at a large plant in Singapore.
- European Silicon Structures (ES2), a novel pan-European start-up company which plans to make low-volume custom chips, raised \$60m in financing from European investors including industrial groups such as British Aerospace, Saab-Scania of Sweden and Olivetti, of Italy.

This sudden flurry of activity reflects the renewed urgency with which Europe's electronics industries are striving to regain lost ground after a long period of standing on the sidelines while US and Japanese companies battled for supremacy in the fastest-growing sectors of the world microelectronics components markets.

European companies have a long way to catch up. Last year, according to the market research firm Dataquest, their semiconductor sales totalled

Worldwide merchant semiconductor production

	1980	1985
U.S.	60%	47%
Japan	25	39
Europe	13	11
ROW	2	3
	100%	100%

Source: Integrated Circuit Engineering Corp.

Top ten semiconductor suppliers

1984		1985	
1. Texas Instruments		1. NEC	
2. NEC		2. Texas Instruments	
3. Motorola		3. Hitachi	
4. Hitachi		4. Motorola	
5. Toshiba		5. Toshiba	
6. Philips		6. Philips	
7. National Semiconductor		7. Fujitsu	
8. Intel		8. National Semiconductor	
9. Fujitsu		9. National Semiconductor	
10. Matsushita		10. Matsushita	

Source: Integrated Circuit Engineering Corp.

\$2.35bn, less than one-tenth of the \$24.7bn world market. US-based companies sold \$11.45bn, closely followed by Japanese suppliers with \$10.7bn. Moreover, the only European company to rank among the top 10 semiconductor suppliers is Philips, two-thirds of whose component sales are generated by Signetics, its US subsidiary. On the other hand, European suppliers managed to avoid the worst of the industry slump. Their sales last year were only slightly below the 1984 level, compared with declines of 23 per cent and 5 per cent respectively for the US and Japanese industries.

Some individual European companies performed strongly, notably Britain's Plessey, which maintained profitable growth thanks to its specialised custom business. But there were casualties too: Britain's troubled STC abandoned plans for a large-scale entry into "standard" chips, while Thomson began a search for partners to invest in Immos, its loss-making chip subsidiary.

The recent resilience of European suppliers' sales is due to

memory chip market, but because they believe the rigorous technical disciplines required by mass-production are essential to staying in the forefront of technology.

Both European companies hope to reap the main benefits of megaproject through sales of sophisticated components for specialised applications: Siemens expects to use them particularly in telecommunications equipment, while Philips is aiming primarily at consumer electronics products.

Thomson views its expansion programme as a means of bolstering its competitiveness in defence electronics, its main business. It hopes that deeper involvement in "standard" chip markets will contribute both technical advantages and, more questionably, an additional source of profit from which to finance its mainstream research and development programmes.

But these ambitions carry big risks. To help to shoulder this burden, Siemens, Philips, Thomson and SGS-ATES have all obtained generous support from their national governments. Britain is a rare exception among EEC countries in not subsidising an indigenous chip-maker.

Mastering the technology is only part of the challenge, however. To make their new semiconductor initiatives commercially viable, European companies must also move more aggressively to achieve large economies of scale in production and marketing. The necessary volumes can, in most cases, be attained only through a broad-based attack on major international markets.

European Silicon Structures, which was formed late last year, has adopted an original approach to this problem by organising itself from the start as a pan-European company. The company's founders argue that European semiconductor companies have been handicapped in the past because they became prisoners of "national champion" policies which discouraged them from venturing far beyond their home markets. Now they hope that by deliberately eschewing identification with any one country ES2 will be in a better position to treat the whole of Europe as a single market.

Guy de Jonquieres



A small-dish satellite aerial for British Telecom digital services installed on a North Sea rig

Telecommunications

Monopolies forced into upheaval

OF ALL Europe's high-technology industries, none is in the throes of such violent, confusing and far-reaching upheaval as telecommunications.

After decades of steady and largely predictable development within a monopoly framework, Europe's telecommunications industry is suddenly being forced to adjust to the impact of powerful pressures for change from all sides:

- Technological "convergence" is rapidly eroding long-standing barriers which have separated telecommunications, not only from computing but also from businesses such as financial services and banking, which increasingly depend on sophisticated electronic systems to process and transmit information.

- The aggressive pursuit of deregulatory policies by the US, which has led to the spread of international competition in transmission and services, are posing major challenges to the finances and operating methods of European national telecommunications monopolies (NTTs).

- A proliferation of innovative products and services is opening up a far wider range of choice to telecommunications users.

- A shake-up in Europe's overcrowded telecommunications equipment industry as manufacturers expand beyond home markets which are no longer big enough to support soaring product development costs.

Until a few years ago, officials in many of Europe's NTTs imagined that by standing their ground, they could resist or tame these forces. But under pressure from international competition and from their own national governments, they are now being forced to adjust.

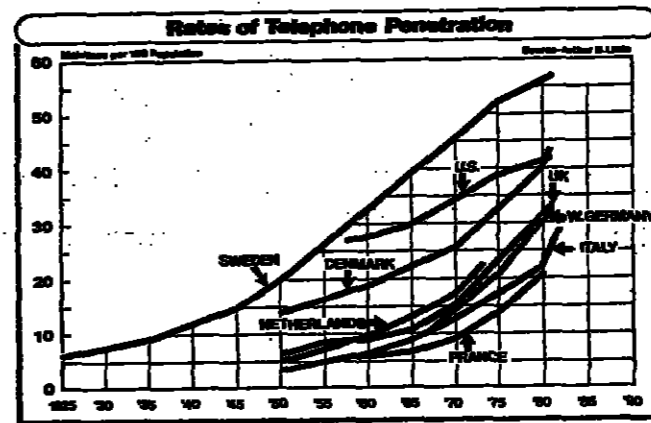
Two main policy trends are discernible: one is liberalisation of markets to allow increased competition, particularly in the provision of new "value added" services such as data-base information systems and electronic mail. The second is privatisation, which has become a shorthand term for granting increased commercial independence to NTTs by removing them from direct government control.

However, the balance struck between these two goals varies considerably between countries. In that the emerging pattern in Europe is far from uniform. To date, the most radical action has been taken by Britain, which pioneered policy reform in Europe by liberalising its telecommunications market in 1981 and selling just over half of the state's shares in British Telecom to private investors in 1985.

Both the Netherlands and France have announced plans for more liberal policies. However, neither they nor any other European country aims to follow the example set by Britain in licensing the privately-owned Mercury Communications to compete with BT in operating a national network. Moreover, though present thinking calls for less government control over the Dutch and French NTTs, both are expected to remain state-owned for the foreseeable future.

Whether it will prove possible in practice to liberalise telecommunications services without admitting some competition in the public network remains to be seen. US and British experience strongly suggests that if new information services are to be permitted the regulatory freedom they need to grow rapidly, NTT monopolies may have to be prepared to tolerate some re-sale of capacity on their networks to third parties and consequent revenue losses.

In West Germany, Europe's largest telecommunications market, a government committee is reviewing the role of the powerful Bundespost. It is unlikely, though, that any serious moves will be made to modify policy before the next federal elections, and the



Rundespost is bound to resist strongly any serious effort to curtail its monopoly.

None the less, even the Bundespost and other ultra-traditional NTT monopolies are being forced to meet the challenge of recent price competition on international routes. Most are reluctantly responding by cutting their own international tariffs, even though the resulting revenue losses can only be offset in the short-term by politically controversial price rises on domestic services.

For Europe's telecommunications equipment industry, these trends bring mixed blessings. On the one hand, genuine liberalisation is likely to stimulate demand and open up opportunities in individual countries. On the other, if each country responds in a different way, the existing fragmentation of national markets is likely to persist.

Differing national standards and equipment testing procedures pose major problems for the industry. It is estimated, for instance, that it would cost

a manufacturer one hundred times more to get an item of subscriber equipment approved for use in every European country than for sale on the US market. Moreover, large parts of many European markets are blocked off by PTT procurement practices which discriminate in favour of local suppliers.

The EEC Commission has launched several initiatives to try to remove these obstacles. They include Race, a project to define common standards for future optical communications systems, and a proposal that European NTTs agree formally to recognise each other's equipment testing and approval procedures.

However, the Commission enjoys very limited authority, and no European manufacturer can afford to pin its hopes merely on efforts to open up EEC markets. Farsh commercial pressures have already forced suppliers to abandon development of their own digital public exchanges and prompted rationalisation moves within national industries.

But Europe still has more telecommunications equipment manufacturers than its markets can support. In an effort to survive, most companies are now looking increasingly to international collaboration arrangements and alliances to reduce costs and open up new market opportunities.

Though some modest steps have been taken by manufacturers in the EEC to pool their resources in component development, the dominant axis of collaboration looks more likely to be transatlantic than intra-European.

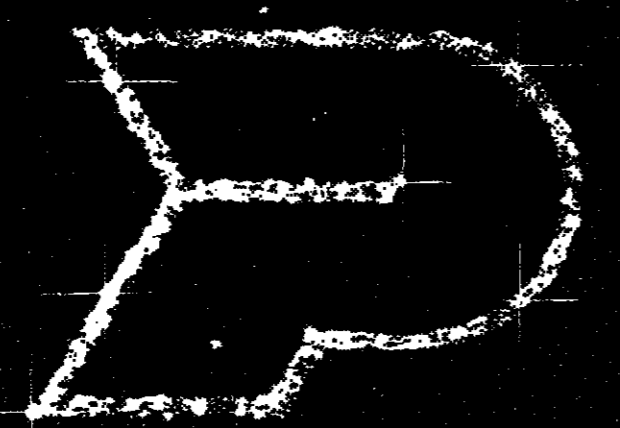
Several European companies are trying to establish a presence in the vast US market by linking up with local partners. Britain's Plessey bought Stromberg-Carlson several years ago. France's CIT-Alcatel has acquired several small US companies. West Germany's Siemens is holding talks with GTE and Sweden's L. M. Ericsson formed a joint venture with Anaconda, which it has since bought out of the arrangement.

Meanwhile, the Dutch Philips group has pooled its public telecommunications equipment business in a joint venture with American Telephone and Telegraph, which is also in protracted negotiations on a proposed link-up with CIT-Alcatel.

The French Government is expected to decide soon whether to approve the latter project. If its attitude is favourable, as is widely expected, the deal would entitle AT&T to compete for up to 15 per cent of France's highly-protected public telephone exchange market in exchange for helping CIT-Alcatel to sell its products in the US.

Guy de Jonquieres

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EUROPEAN HIGH TECHNOLOGY 3

Computer Software

On the verge of a breakthrough

THE SOFTWARE industry is on the verge of a major breakthrough in productivity, and European software companies look like playing their full part in it.

Whether or not they will benefit commercially from their efforts is another question. The harsh fact is that an overwhelming proportion of all the systems software—that is, software which controls the functions of the computer itself or which makes it simpler to carry out data processing used in Europe—is North American in origin.

To some extent this is simply a function of the predominance of IBM in European Data Centres and therefore the use of its major operating software, including its flagship systems VM and MVS.

Even so, through companies like Cullinet, ADR and Boole and Babbage, the US seems to have a stranglehold on the market for the everyday working tools of the data-processing professional.

It seems fair to say that while some nations show a propensity for computer programming, good software production knows no frontiers. For years, for example, it has been received wisdom that the Japanese were unable to write high quality software. That prejudice is now rapidly evaporating.

Although European companies show up better where it comes to applications software—that designed to carry out a specific task such as payroll processing or personnel record management—US skill in developing “packaged” solutions has given companies like Management Science America, McCormick and Dodge and Comshare a powerful European presence. It is not software writing skill that gives the US the edge—it is marketing and a sound home market.

French software and services organisations dominate the league table showing revenues earned by companies from sales within Europe because of the large amount of bespoke programming they carry out for French companies. This stems, at least in part, from a French reluctance to use programmes written in English primarily for

English-speaking processing centres.

The “packaged” software approach works well for US companies with their substantial home markets to use as a base for overseas sales. Packages are generalised pieces of software designed to carry out a particular task as long as the user bends his business routines to fit the package rather than the other way about.

Because of the economies of scale in selling the same software to multiple users, a package can be marketed for a fraction of the price of a tailor-made system. According to the marketing consultancy International Data Corporation, the market for packaged software is expected to grow from 34 per cent of the total software and services market last year to 50 per cent by 1991.

Over the same period, IDC estimates, the proportion of the total market taken by custom software and consultancy will stay constant at 28 per cent.

These figures may be influenced, however, by substantial changes in the way software is produced. For the most part it now seems more of an art than a science. The user's requirements are agreed, a system specification is drawn up and programmers write the computer code which converts that specification into usable software.

In practice, there are usually costly over-runs both in time and money as the user's requirements change, the time taken to develop a piece of code is wrongly estimated and as it proves difficult to link together all the pieces of the system.

All this has given software production a poor image and given fresh impetus to software as a scientific and professional basis.

European companies like Cap Gemini in France and Imperial Software in the UK are among the world leaders in software engineering, although it has to be said that software engineering programmes are under way in all the developed countries.

The aim is to develop programming systems or IPSEs (integrated programming software environments) which put

the whole of software production on a scientific basis. IPSEs integrate the work of an entire software team so it is always working towards agreed goals using agreed methods and software “tools” make the production of software easier by, for example, automatically documenting (“writing-up”) the process as the programmer works.

Such techniques could bring about substantial changes in the economics of bespoke software production.

The influence of the personal computer workstation is likely to be equally significant in changing the costs of software production.

There is already a strong need for multiple copies of workstation programs in big corporations to be used on all the personal computers a corporation owns. In such circumstances it is economically sensible to generate a tailor-made program, possibly using special software engineering tools such as “fourth generation languages” which all but write the code automatically rather than moulding the organisation uncomfortably around a package.

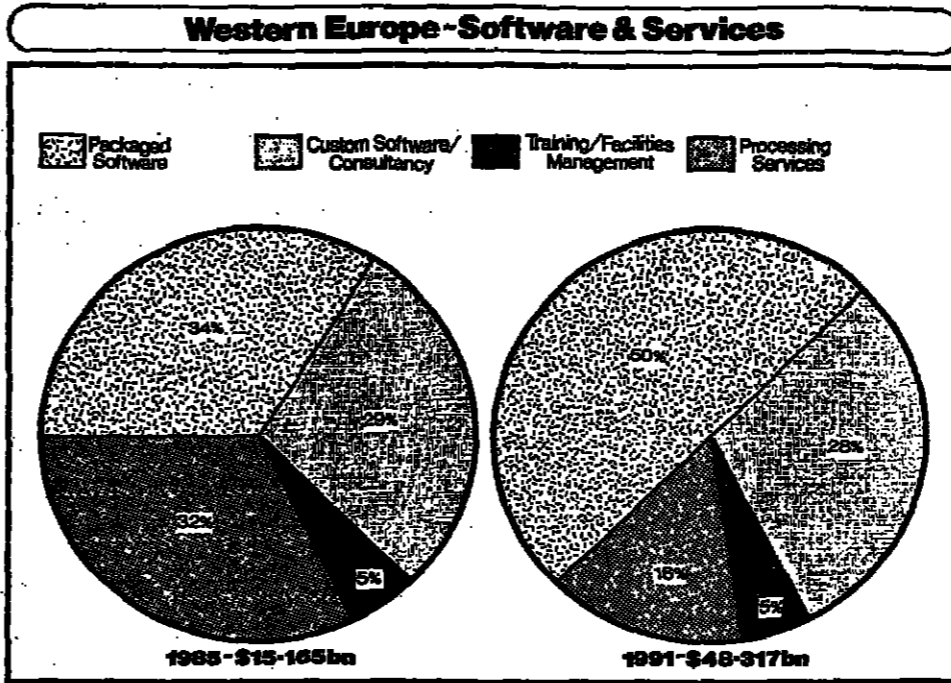
As Mr Philip Hughes, chairman of Logica, told the Royal Society recently: “The role of the custom software company shows no sign of declining... it uses packages as and when appropriate and increasingly uses systems terminals.”

“The seemingly sharp distinction between software products and custom software is likely to become blurred.”

All this should be to Europe's advantage. But it is trying hard to turn things to its own advantage, especially with the new emphasis on an operating system called Unix as the systems environment of the future.

Unix, written at Bell Laboratories, is a powerful operating system much liked by programmers although flawed in many respects. But it has the advantage of not being part of the IBM range of systems software and is therefore seen as a bulwark for Europe against the US giant.

Alan Cane



Software and Services Market

	1985 \$bn	Share %	— Estimate —	
			1991 \$bn	Share %
West Germany	2.76	15	8.53	20
France	3.29	22	10.20	21
Italy	1.59	11	5.23	11
UK	2.66	18	8.56	18
Western Europe	15.16		48.31	

Western European Vendors - 1985

Company	Country	Worldwide Revenue*
Cap Gemini Sogeti	France	247.3
Science International†	UK	143.4
GSI	France	138.1
Sema Metra	France	128.8
SGS	France	122.4
Datav	W. Germany	121.8
CSI	France	102.1
Scanstret	Norway	95.8
SESA	France	86.2
Thorn-EMI‡	UK	84.1
CCMC	France	80.3
Volvas	Netherlands	81.3

* From pure software and services, excluding captive revenues.
† Includes SC division in the US.
‡ Includes Datasolve and Software Sciences.
Source: IDC

Computer Technology

Alliances sound nationals' death knell

THE QUALITY of the European contribution to the development of computing has never been in doubt, even if it has only rarely been translated into commercial success.

To take only three examples: 20 laboratories throughout Europe are well advanced with a collaborative project to develop a computer designed to process information using light rather than electricity. Such a machine could operate, in theory, 1,000 times faster than conventional computers.

A broad spectrum of companies in Europe, the US and Japan are developing products based on the transputer, a complete computer-on-a-chip device and built by the UK company Inmos.

The transputer is perhaps the most radical development in microprocessor design yet seen and a major step towards parallel processing architectures, the foundation for tomorrow's computers.

The world's first personal computer was developed in France even if the US Altair and Apple Corporations swiftly grabbed the early honours in personal computing.

Despite all this technological brilliance, Europe now has nothing to offer in the super-computer stakes, a field dominated by the US companies Cray and CDC and the Japanese NEC. It has little more in conventional mainframe data processing, a few brilliantly effective but only locally successful minicomputer companies and a handful of good microcomputer companies, of which only one, Olivetti (which offers a full range of business computers), can really be considered a world-class player.

Where there have been successes they have been the result of strategic alliances. Olivetti, for example, which builds a perfectly good range of business microcomputers, markets them in the US through alliances with the telecommunications giant AT & T and the office systems supplier Xerox.

Its tiny M10 portable computer, however, is bought in from the Japanese company Kyocera and badge-labelled. The more advanced M22 was designed by Olivetti in Ivrea and is built to specification in Hong Kong.

In the same way, Olivetti's offering in the important fault-tolerant computer sector is bought in from Stratus, another US company, while its top-of-

the-line mainframes are from the Japanese electronics giant Hitachi. Versions of the same machine are marketed by the West German company BASF and the US National Advanced Systems, a subsidiary of National Semiconductor.

There can be no guarantee that Olivetti's ambitious strategies will ensure its success, but strategic alliances and more intelligent marketing approaches have sounded the death-knell for the old and discredited “national champion” computer manufacturer.

ICL of the UK, for example, at one time Europe's only indigenous mainframe manufacturer, now builds its top-of-the-range machines by courtesy of chip technology from Fujitsu of Japan.

Bull of France markets mainframes obtained from Honeywell of the US and NEC of Japan.

Siemens of West Germany markets large mainframes obtained from Fujitsu.

Lacklustre marketing apart, Europe seems to have played almost no part in the development of the major current trends in data processing.

France may have been first with the personal computer, but all the push in personal computer technology today comes from the US.

Where was the European Compaq, able to capitalise on the move to multi-user computing in the office could help local champions like ICL and Apricot in the UK, which have special skills in networking and communications.

There should also be technological spinoffs from the big European research programmes, Esprit and Eureka, which can be turned to commercial advantage.

European manufacturers are putting a great deal of faith in standards—in particular the international standard for the interconnection of machines of different manufacture—Open Systems Interconnection or OSI.

They see this as a way for the Europeans to start equal with their US competitors. IBM is already well-entrenched with its own interconnection standard for its own mainframes, Systems Network Architecture or SNA, which gives it a powerful advantage in corporate networking.

But IBM is already playing a full part in the development of OSI, which the European manufacturers could find less a barbed than a Trojan Horse.

Alan Cane

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FINANCIAL TIMES SURVEY

European High Technology

Partnerships are proliferating across Europe in an effort to harness innovations for the fierce global technology race

Fresh impetus for collaboration

EUROPE'S EFFORTS to revitalise its high-technology industries are set to receive fresh political impetus today when some 40 ministers from 12 European governments meet in London to formalise arrangements for the Eureka programme of joint industrial research and development.

Eureka, which has been in gestation for a year, is the latest and most eye-catching in a series of collaborative high-technology programmes launched in Europe with government backing in the past few years. It follows several EEC-wide initiatives—Esprit (information technology), Race (telecommunications) and Brille (manufacturing technology)—and, in the defence field, plans for development of a European combat aircraft.

Behind this urge to club together lies a growing anxiety that European industries risk being left trailing far behind the US and Japan in the fierce global race to harness and exploit advanced technologies.

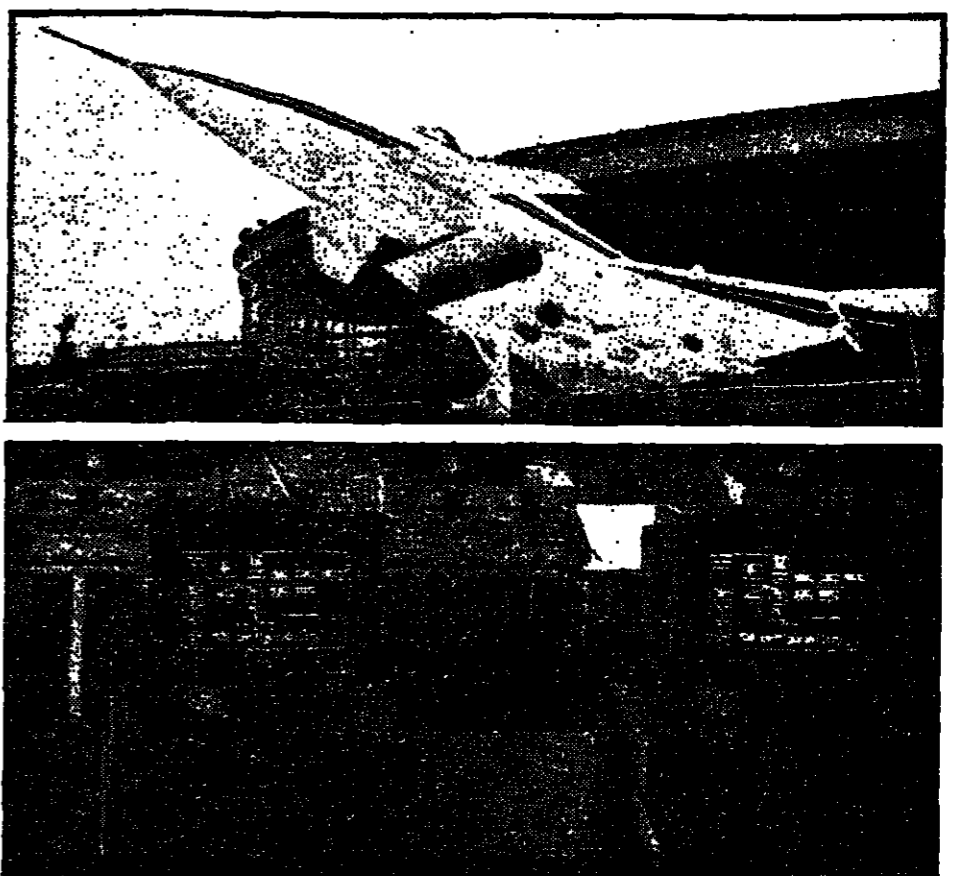
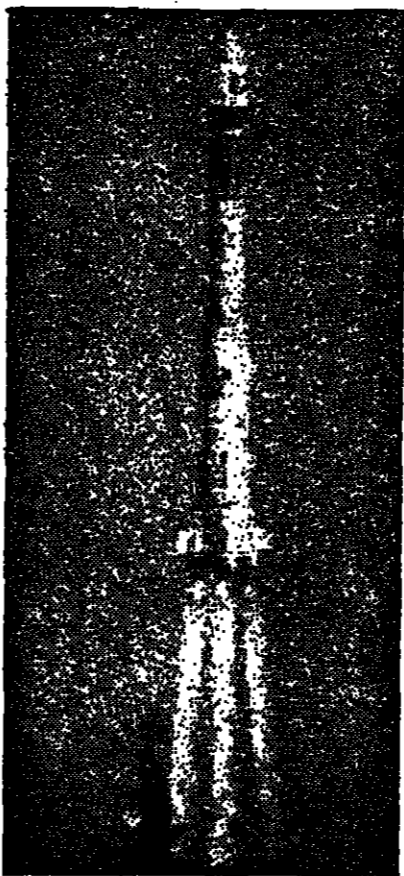
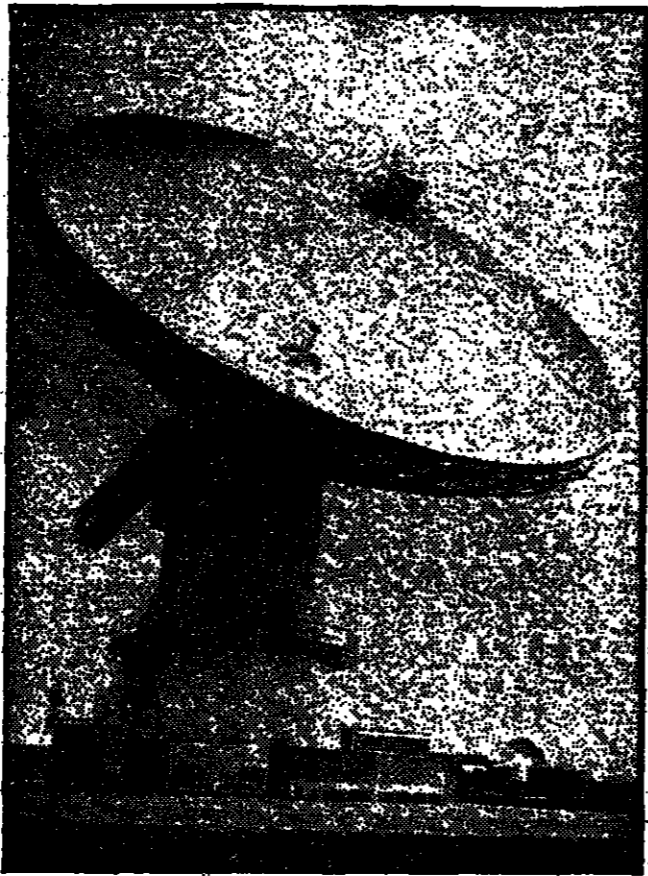
In certain key areas, notably electronics and information technology, Europe's industrial position is already weak. Its computer markets are dominated by US companies led by International Business Machines; European-owned manufacturers account for a mere 10 per cent of world microchip sales; and in telecom-

By Guy de Jonquieres

munications equipment many European suppliers are struggling with inadequate economies of scale in an industry burdened with excess capacity.

There are bright spots, too. The sales success of the European Airbus has established it as a credible competitor to Boeing; the Ariane space launcher (at least until its recent mishaps) has challenged the US Space Shuttle; and Europe can count some promising contenders in growth industries such as robotics, biogenetics and new materials.

Beyond that, the debate has also begun to acquire more overtly political dimensions, due partly to the Reagan administration's moves to tighten control over US high-technology exports while seeking to mobilise massive resources behind the Star Wars project.



Key areas for collaboration programmes include: telecommunications; information technology; defence and aerospace

These developments have aroused uneasy suspicions that the US was bent on dominating key civil and defence technologies and on keeping a firm grip over their international diffusion. President Mitterrand's warning last year that US plans for Star Wars could turn Europe into a continent of sub-contractors struck a chord with more than one of France's neighbours.

The underlying causes of Europe's sense of vulnerability are complex and often hard to define with precision. For a start, there are few reliable measures of technological performance. Many of those most

commonly used, such as R&D spending per capita or the R&D intensiveness of exports, either involve subjective judgments or are open to disputed interpretation.

Secondly, conditions vary widely between European countries. For instance, post-war policies in Britain and France have emphasised glamorous prestige projects such as Concorde or the creation of "national champion" high-technology companies—often with disappointing commercial results. West Germany, by contrast, has tended more to apply technology to improve the competitiveness of traditional sec-

tors such as engineering. Broadly speaking, though, Europe's problem does not lie in any critical shortage of basic technological resources and skills or of funds to support them. Its weakness, rather, has been its failure to organise properly to exploit the maximum commercial advantage from its innovations.

Some analyses suggest that Europe lacks enough high-technology companies big enough to challenge the largest US and Japanese competitors internationally. This argument, however, does not appear to stand up to close examination. Not only do companies such

as West Germany's Siemens, Philips of the Netherlands and Britain's GEC have substantial revenues by any standards. But many of the technology industries' outstanding success stories in recent years have been companies such as Digital Equipment of the US, West Germany's Nixdorf or Norway's Norsk Data, which grew fast from modest beginnings.

A more plausible explanation is that the structure of Europe's industries has remained too rigid. Its older companies have been slow to recognise that profitable growth in many high-technology sectors requires worldwide marketing resources

and a readiness to experiment with novel approaches to innovation.

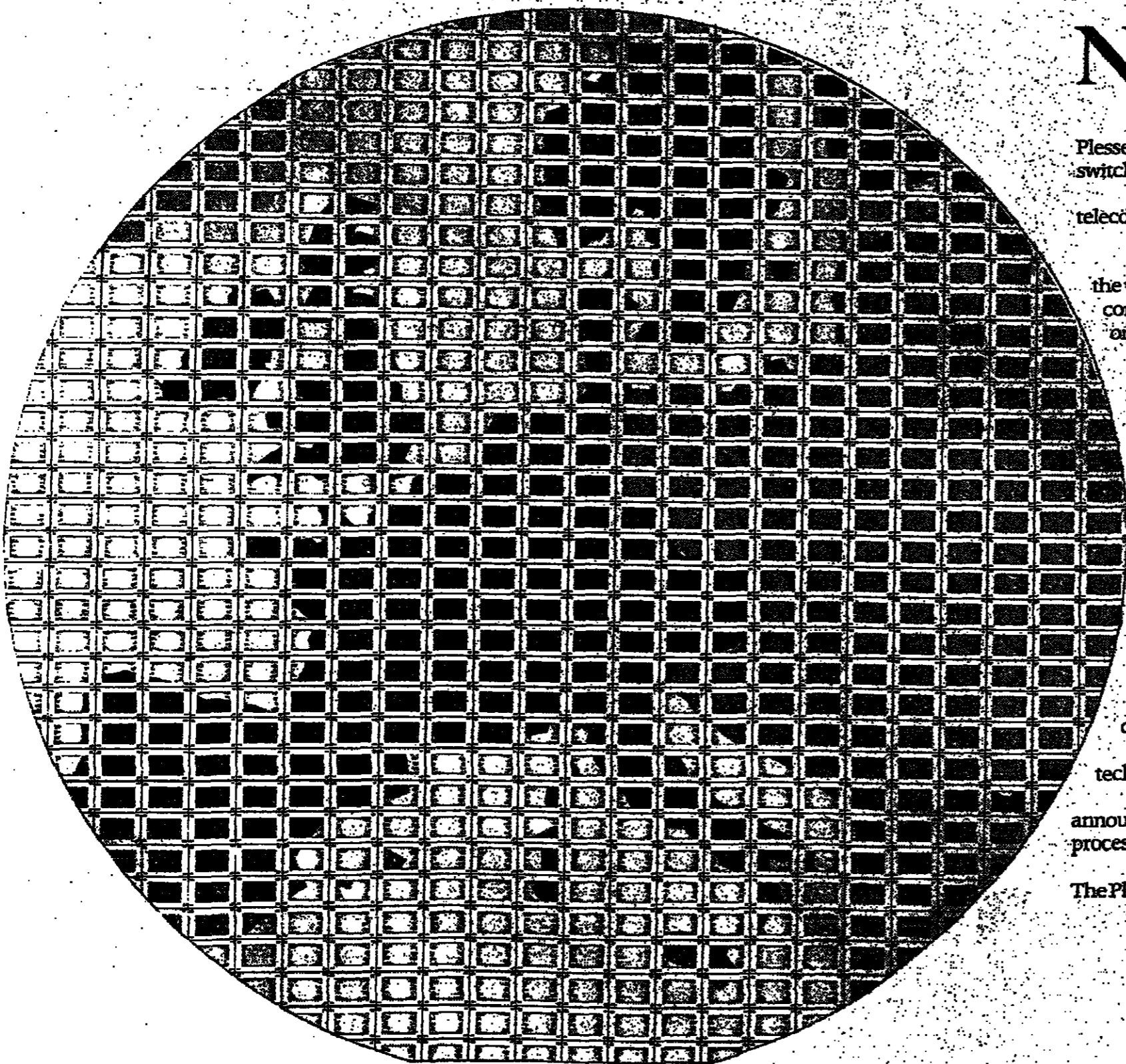
Many larger European companies still rely heavily on home markets which no longer provide adequate economies of scale or, in the case of Philips, have traditionally set up separate operations dedicated to each national market. That contrasts sharply with the ways in which American companies such as IBM, Hewlett-Packard or Texas Instruments have long organised themselves on an EEC-wide basis to take full advantage of the economies of scale and to exploit the full range of worldwide marketing resources

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Electronics partners in an integrated Europe



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EUROPEAN HIGH TECHNOLOGY 4

Space

Cash demands may test partnership

WESTERN EUROPE'S space activities provide a cheering example for those who argue that political collaboration in Europe over technological development can produce positive industrial results.

Europe's extra-terrestrial ventures are focused on the European Space Agency, based in Paris, with an annual budget provided by its 11 member-nations. Each country's share is in rough proportion to its GNP.

The agency, formed 11 years ago, formulates a series of space programmes, most of the work on which is left to aerospace and other technology based companies in the member countries.

Out of this arrangement has come the Ariane rocket, launches on which are sold by ArianeSpace, a company based near Paris.

Despite an Ariane failure at the end of May, the fourth in 18 missions and one which seems likely to hold up further launches for next few months, the Ariane programme is widely regarded as a success

which has dented the monopoly of the US in offering commercial launch services for satellites.

Other success stories in this collaborative venture are a series of telecommunications and weather satellites, and the construction of Spacelab, a reusable set of hardware for space experiments, which travels into the heavens inside the cargo bay of a US space shuttle.

The most obvious winners from the ESA operations are such companies as MBB-Ernst and Dornier in West Germany, Aerospaiale and Matra in France, British Aerospace and Marconi in Britain, and Alitalia in Italy, which gain immediately from the contracts handed out by the Paris organisation.

ESA argues, with some justification, that the work it sponsors benefits not just the big companies but a large number of smaller concerns, which gain useful expertise in a range of technologies from new materials to computers.

Ensuring pan-European participation in space technology has been no easy matter. The will to collaborate has taken shape slowly over a period of more than 20 years as the European nations have gradually ironed out their differences.

This was especially apparent at a special ministerial meeting in Rome, in January last year, which, with surprising unanimity, decided on the outline of a European space programme for the next decade.

The representatives of the different countries could hardly restrain their delight at the level of agreement and the general absence of bickering.

That does not mean, of course, that all the problems are resolved. Indeed, quite a few are building up as Europe considers the details of how it should approach the next decade in space.

The first question is the matter of spending. ESA's budget for 1986 is \$987m (1,059bn European accounting units). France and West Germany contribute virtually half of this, in roughly equal amounts. Italy and Britain provide 14 per cent

and 12 per cent respectively, with the other members (Belgium, the Netherlands, Spain, Sweden, Switzerland, Denmark and Ireland) putting up the bulk of the rest. Three associate members—Austria, Norway and Canada—contribute 2.4 per cent between them.

National space programmes totally, under the control of the individual countries, add about another \$700m to the overall budget of Western Europe. The continent's total annual spending on space, roughly \$1.7bn, looks small set beside the \$15bn the US Government spends each year on civilian and military activities beyond the atmosphere.

At the Rome meeting, the ESA nations agreed to increase the budget by 70 per cent by the early 1990s. This is to take into account a string of ambitious programmes, chiefly the further development of Ariane to produce a heavy-duty version called Ariane-5 capable of taking bigger satellites into orbit, together with the construction of Columbus, an orbiting laboratory that would fit into a

maned space station planned by the US for the mid 1990s.

Despite this commitment, the extra cash away from national treasuries over the next few years may prove difficult.

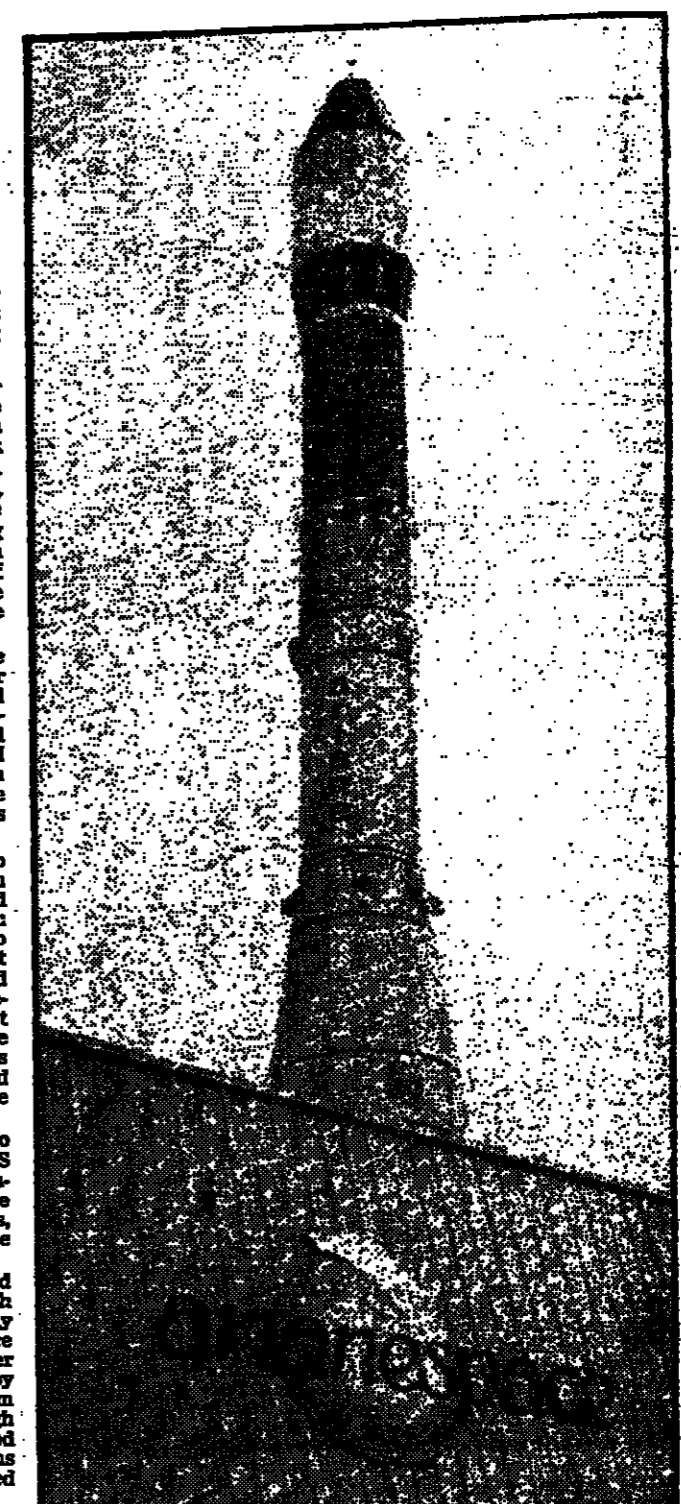
A second issue is just how quickly Western Europe should progress in space. France and, to a less marked degree, West Germany are both keen to press on with developments in establishing a European space station in the early years of the next century.

The arguments are that, by achieving a permanent manned presence in the heavens, Europe can gain experience in a variety of disciplines. These include viewing Earth with high-powered cameras for applications such as landmapping and experiments in low-gravity materials processing, which may provide new ways to make exotic substances. Similar views have been advanced to press the case for the US space station (which the National Aeronautics and Space Administration hopes to have in orbit by 1994 at a cost of about \$5bn) and for the series of more modest manned space outposts which the USSR has already deployed over the past decade.

Some observers have, however, voiced scepticism over whether these goals are realistic within the time frame proposed by the more bullish exponents of extra-terrestrial adventures.

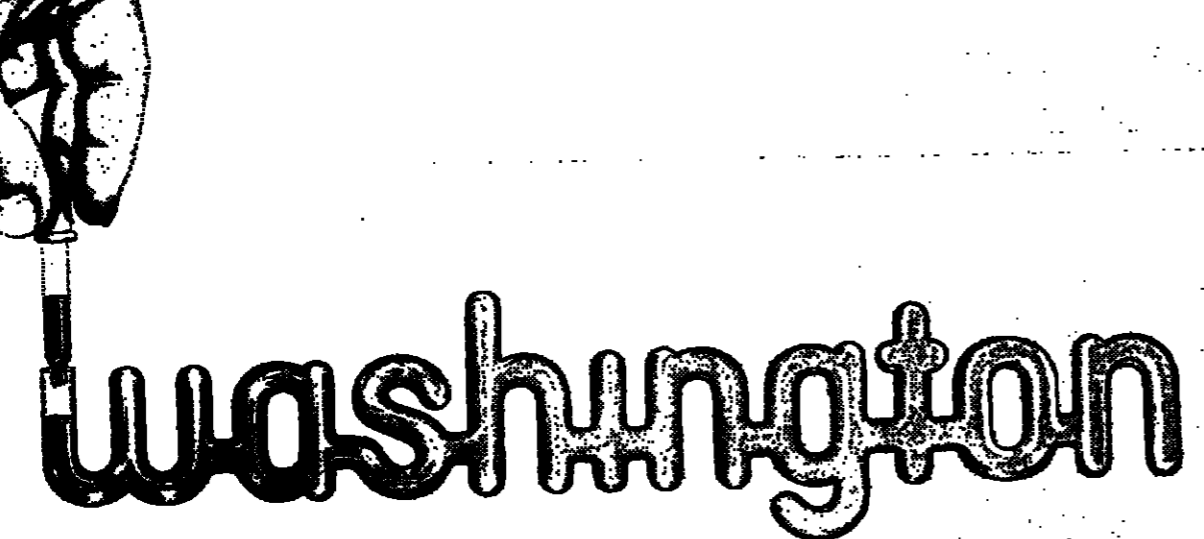
In particular, the drive by France, Western Europe's most ambitious space power, to develop Hermes, may be frustrated for want of agreement from the other ESA nations. Hermes is a manned "mini space shuttle," which would enter orbit on top of an Ariane rocket to ferry people and materials to and from a space station.

France wants an agreement to begin the development of Hermes next year, ready for operation in 1995. But the design cost—on top of \$2.6bn each for the develop-



The European Space Organisation launch vehicle Ariane

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Civil Aviation Technical boundaries pushed back

FOR MANY years, the world's aerospace and associated industries have been the spearhead for the development of advanced technologies in such diverse fields as electronics, metals, ceramics, carbon-fibres and other composite materials, automated manufacturing methods, and even in the fundamental design of advanced shapes and structures.

While these developments have been generated primarily by the rigorous requirements of complex military aircraft and engines, more recently the civil aircraft and engine manufacturers have themselves been initiating technological advances to meet the increasingly competitive demands of the world's airlines for quieter, more fuel-efficient and lower-cost equipment.

Although advanced technology in many forms is being incorporated on all of the new airliners now being manufactured in Western Europe (such as the British Aerospace 146 regional jet airliner, the Fokker F-50 turbo-prop and F-100 twin-jet airliner, and the Franco-Italian ATR services regional airliner), it is probably Airbus Industrie that is the biggest user of these new developments.

Airbus, the three-manufacturer consortium of British, West German, French and Spanish shareholders, with associates from other countries such as Holland and Belgium, also involved, has pioneered some of the most progressive incorporating new technological developments in all its products. But the latest A320 150-passenger airliner, first flown in 1985-86, represents the biggest combination yet of such techniques in one commercial aeroplane.

The improvements in the A-320 range start with the dynamic design (stemming from British Aerospace), embodying the Airbus philosophy of small, highly-loaded wings, offering high structural integrity with a considerable weight reduction compared with conventional designs.

The result is a highly efficient wing, with weight savings that benefit the aircraft in all phases of flight. At lower altitudes, the small wing area keeps drag to a minimum; while at greater heights, the better load distribution gives a better load distribution, in turn providing economical cruising characteristics equivalent to those of bigger wings.

The A-320 will also feature one of the most advanced electronic flight decks yet seen in any commercial airliner, with extensive TV displays of critical systems information—such as fuel status, navigational details, the functioning of engines, hydraulics and other items.

The A-320 will also incorporate "fly-by-wire" controls, in which the control surfaces—ailerons, rudders, elevators, roll spoilers and all trimming controls, together with flaps and slats) will be activated by electronic signals, instead of by conventional rods, wires and pulleys.

At the same time, the A-320 will make extensive use of carbon-fibre and Kevlar composite materials in much of its structure.

The most significant result of this combination of advanced technological developments is that the A-320, according to Airbus Industrie, will require 43 per cent less fuel per seat than the current generation of narrow-bodied tri-jet airliners such as the McDonnell Douglas DC-10 and Lockheed TriStar, and between 15 and 32 per cent less fuel than the various narrow-bodied twin-jet airliners offered for short-range operations, such as Boeing 737 and McDonnell Douglas MD-80. The consequent direct operating cost of the A-320 will also be significantly lower than those of current tri-jet or twin-engine jet airliners.

Even further advances in technology will be incorporated into the next generation of Airbus airliners now being planned for operation in the early 1990s. The 200-seat, short-to-medium range A-330 and the 260-plus seat A-340 four-engine long-range airliner.

Even in the comparatively short time that has elapsed since the A-320 was ordered into production in the early 1980s, aircraft manufacturing technology has moved on; and it is now possible for Airbus to offer prospective customers for the A-330/A340 airliners further improvements.

These range from advanced aerodynamic shapes (especially stemming from the common wing that the A-330/A340 will share), to the greater knowledge and experience of manufacturing and use of carbon fibre and other composite materials, and of new aluminium alloys such as aluminium-lithium, also now being employed in new military aircraft, such as the UK's Experimental Aircraft Programme (EAP) and to be used in the prospective multinational Eurofighter.

Looking even further ahead, significant advances in propulsion technology are now under development in the new generation of "prop-fan" engines, on which Rolls-Royce of the UK and Snecma, the French aero-engine manufacturer, are already working.

The prop-fan, in essence, is an extension of the already well understood principle of harnessing a propeller to a gas-turbine engine—as in the famous Vickers Viscount and Bristol Britannia airliners—to give a smoother, quieter and cheaper ride than is obtainable with pure jet engines.

The secret of the prop-fan lies in the advanced design of gas-turbine engine, giving greater thermal efficiency, and the radically redesigned propellers, which are shaped more like ship's screws than conventional propellers as understood today.

The combination of these developments results in a power-plant that will give substantial savings in fuel over conventional jet engines, thereby yielding in turn big cuts in direct operating costs while driving the aircraft at speeds close to those of jet airliners.

Such advantages cannot be ignored by airlines, and thus by the engine and airframe manufacturers; and, as a result, the development of prop-fans is sweeping through the aircraft manufacturing industry, but especially in the US, with gathering momentum.

Much work still has to be done, but such big airframe builders as Boeing and McDonnell Douglas, and engine companies such as Allison Division of General Motors, General Electric and Pratt & Whitney, are already promising prop-fan airliners of various types for the early to mid-1990s.

Snecma of France has teamed with GE of the US on the "unducted fan" (UDF) engine, which is to be test-flown this summer in a Boeing 737 flying test-bed. Rolls-Royce is working on various prop-fan designs, including the RB-509 for smaller aircraft for service in about 1994, with an engine for bigger for bigger airliners, such as Jumbo jets, for service later in the 1990s, called the RB-529.

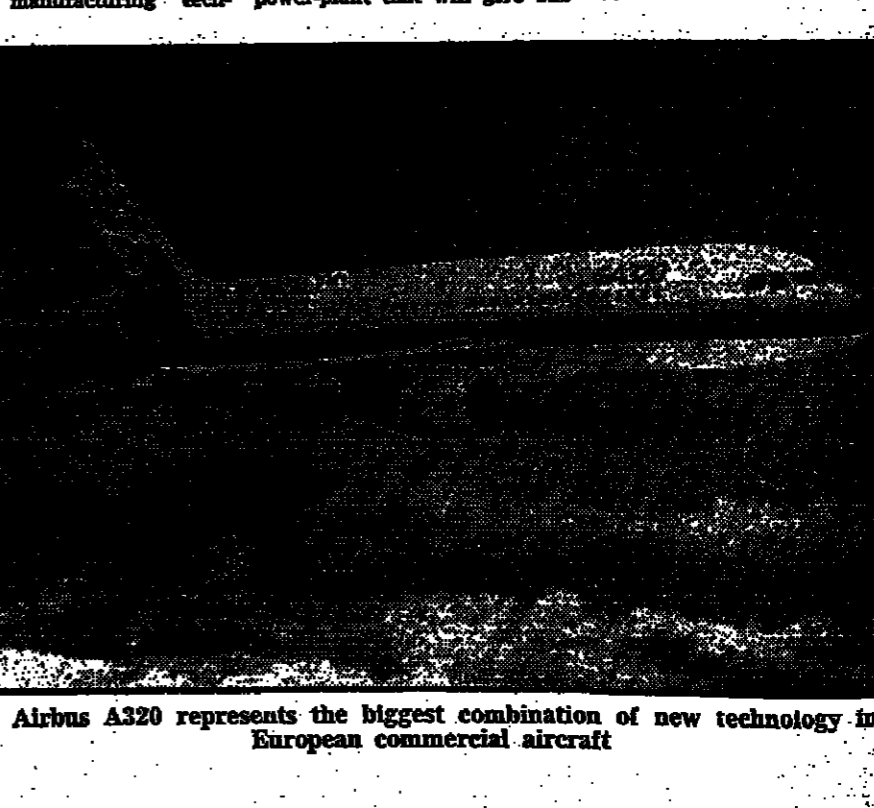
But the pace of development of prop-fan engines is accelerating, and it may well be that many airframe manufacturers in Western Europe, who are at present behind their US brethren in proposing airliners using this form of propulsion, will have to revise their ideas before this decade is out.

Peter Marsh

Civil Aviation

Technical boundaries pushed back

The Airbus A320 represents the biggest combination of new technology in a European commercial aircraft



The Airbus A320 represents the biggest combination of new technology in a European commercial aircraft

July 1986

EUROPEAN HIGH TECHNOLOGY 5

Military Aviation

Flying testbeds show quantum leap

PLANS for two new European multi-national advanced tactical combat aircraft are being pushed forward. One is by the UK, West Germany, Italy and Spain, called the Eurofighter; the other is by France, with possible collaboration from Holland, Belgium and others. Aerospace industries of those countries are already hard at work on what are called the "technology demonstrators" for both aircraft.

In the UK, the latter aircraft is called simply "EAP" for Experimental Aircraft Programme. In France, the comparable aircraft is called the Rafale. Both are due to fly this summer, but it is stressed in both the UK and French aerospace industries that they are not intended as specific prototypes for the fighting machines that will follow later.

Rather, both EAP and Rafale are intended to prove to the governments that will have to put up the money that the European aerospace industries

are more than capable of bringing together all of the advanced technologies that will be needed for the new generation of fighter aircraft planned for the mid-1990s.

Thus, the term "technology demonstrator," coined for this new breed of experimental aircraft, means precisely what it says. In both the EAP and the Rafale, there are combinations of a wide range of advanced aerospace technological developments, in the shape of new materials and new electronic systems, while both aircraft have also been built with the aid of new manufacturing techniques.

All of those developments, on the ground and in the air, will be used in the eventual manufacture of the new tactical combat aircraft now being planned.

As a result, the technological capabilities of the entire European aerospace industry and its allied industries, such as electronics, will take a quantum leap forward.

Earlier hopes of achieving one new advanced combat aircraft, for the whole of Western Europe, founded last year as a result of sharp differences of view as to its size, shape and performance, between the two camps led respectively by the British and the French aerospace industries and air forces.

As a result, work has been pushed ahead in the two separate camps, and it is becoming increasingly clear, as the two experimental aircraft themselves draw closer to their maiden flights and the detailed project definition of their respective follow-on fighters is nearing completion, that any marriage between the two camps is unlikely, if not already impossible.

So far as the EAP itself is concerned, the programme has been aimed at expanding technology in three broad areas. These are: Advanced structural design and manufacturing techniques,

including the extensive use of carbon-fibre composites and other new materials; the "fly-by-wire" system of electronic control of an aircraft in flight, to ensure extreme agility in combat; and development of an advanced electronics cockpit to relieve the workload on the pilot, freeing him to fight rather than to fly.

The EAP, once past its maiden flight this summer, will embark upon an extensive series of flights designed to prove that, in all three areas, the work done so far has been successful, effectively clearing all those new techniques and processes for use in the larger and more expensive Eurofighter combat aircraft programme still being put together.

Because there is only one EAP, that flight test programme will be critically important, for the actual prototypes (the number of which is not yet settled) of the Eurofighter itself will not emerge until about 1989-90. There will be

no second EAP (although it is expected that there will be a second French Rafale).

Nevertheless, the UK aerospace industry, which has been mostly involved on the EAP, with smaller inputs from the West German and Italian industries, is confident that it will be a successful aircraft.

British Aerospace, prime contractor on the EAP, says that the extensive use of carbon-fibre composites in that aircraft, has led to a reduction of up to 30 per cent in manufacturing costs, due to a reduction in the number of detailed parts.

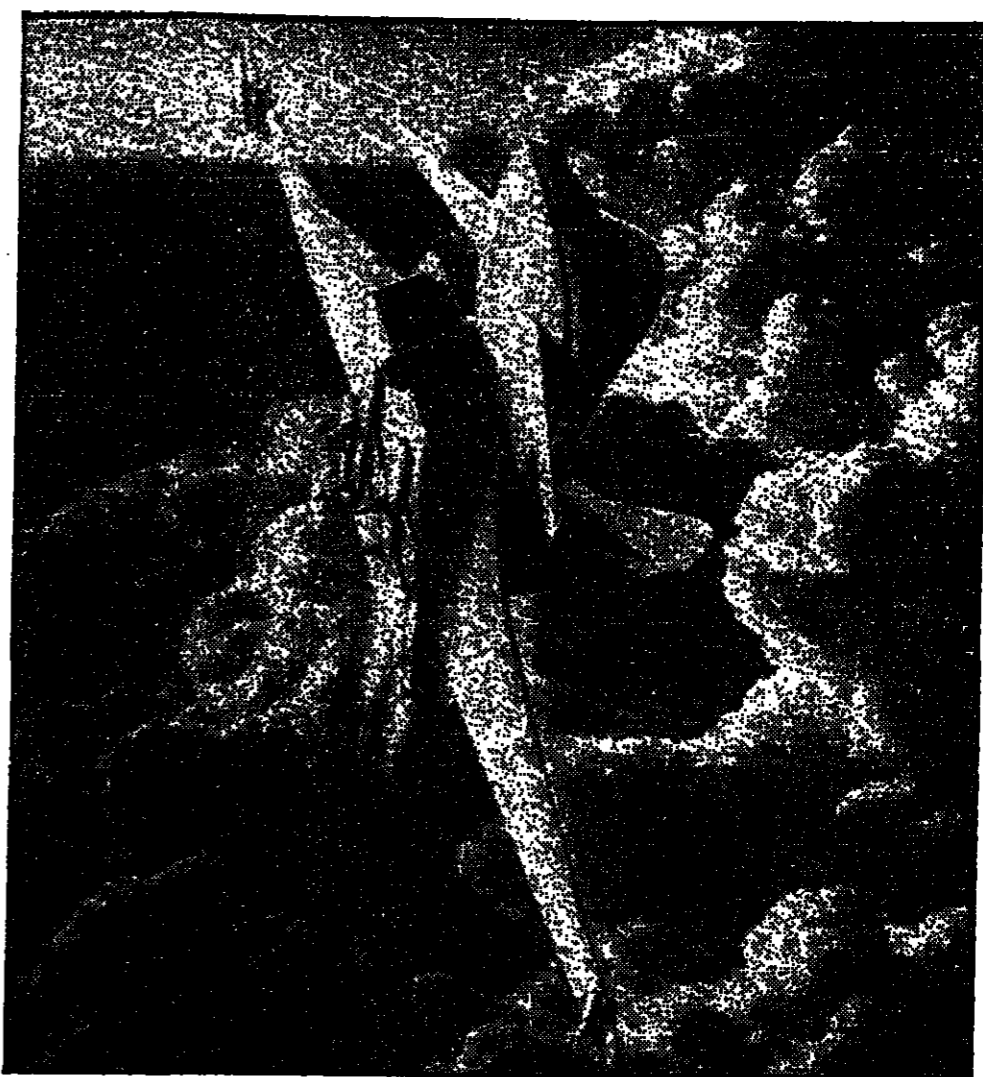
At the same time, there has been an increase in the strength-to-weight ratio in those parts; a reduction in the volume of waste materials; and an increased ability to produce the large, complex shapes that are nowadays required in advanced military aircraft.

But advanced metals are also being used, such as aluminium-lithium, which has greater strength and stiffness than other aluminium alloys, but with a substantial saving in weight and a higher level of corrosion resistance. Titanium is also being extensively used, but in conjunction with new manufacturing and forming techniques, such as superplastic forming and diffusion bonding.

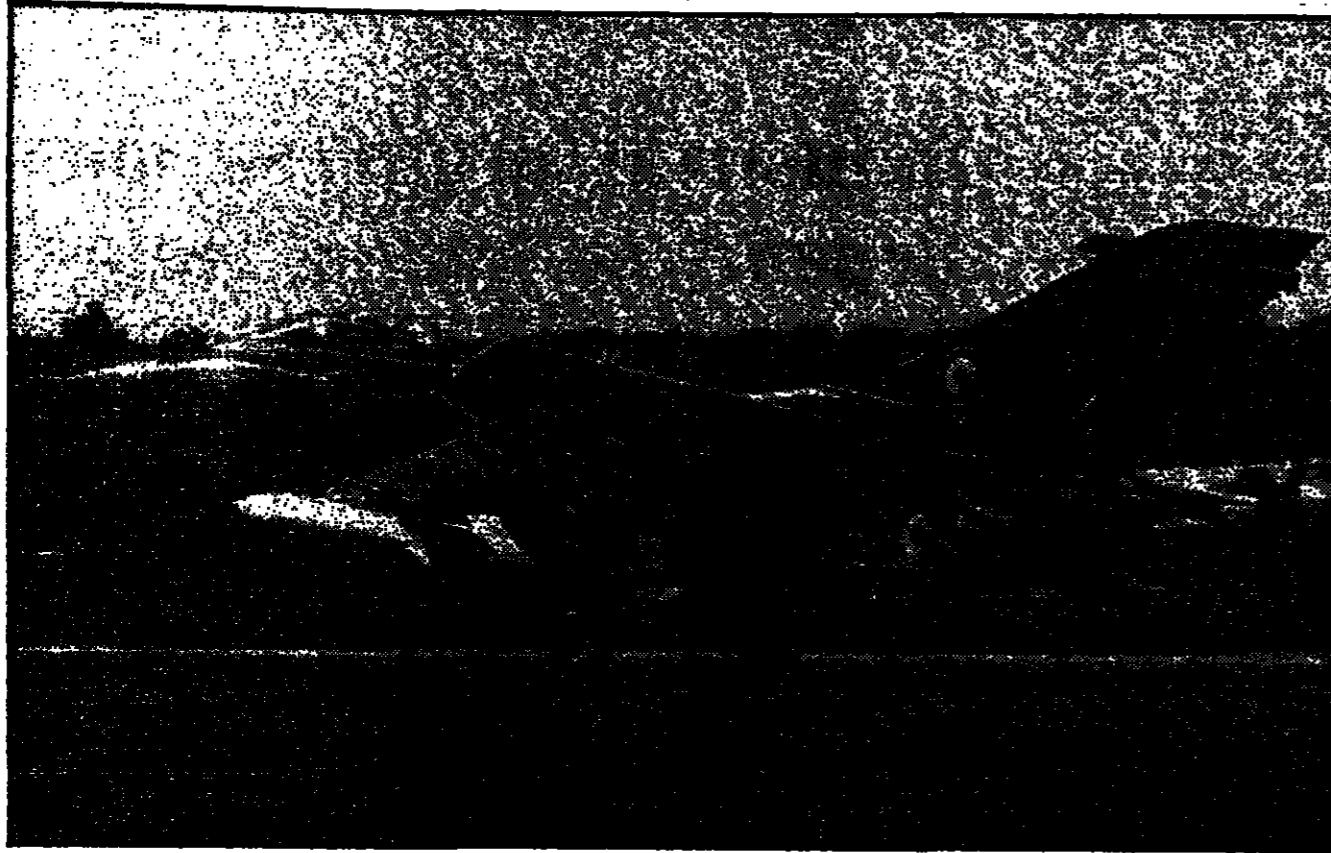
Superplastic forming is derived by heating titanium (and certain alloys of steel and aluminium) to about 30 per cent of melting point, whereupon it can be moulded more easily into complex shapes. Diffusion bonding involves joining titanium alloys at critical temperatures, so as to produce complex shapes that are competitive in terms of cost and weight with carbon fibre composites.

Supporting these developments has been an advanced manufacturing technology programme on the ground, which makes extensive use of computer-aided design and manufacture (CAD/CAM), together with extensive automation through numerically-controlled machining and the use of robotics.

The result is that the complex shapes needed for advanced military aircraft can be produced in one-fifth of the time previously required, with savings of up to 70 per cent in unit costs and big reductions in stocks and the amount of work



The EAP technology demonstrator which should make its maiden flight this summer



The Tornado multiple-role combat aircraft, produced for the UK, West Germany and Italy

in progress. Aboard the EAP itself, the "fly-by-wire" system simply means using electronic signals in place of conventional wires, rods and pulleys to activate an aircraft's controls. As a result, the control surfaces (rudder, ailerons and elevators) and even entire wing sizes, can be made smaller, because they become more efficient. This in turn leads to reduced drag, requiring smaller, lighter engines burning less fuel to do the same job.

Similarly, the advanced cockpit devised by the electronics industry for the EAP will make life much easier for the pilot, by enabling him to read critical information about his aircraft's functions on coloured cathode ray tubes instead of on myriads of dials. He will also be able to call up information at the touch of a button, as a result of the extensive use of small, on-board computers.

All these developments will have considerable significance

not only for military aviation —for they will influence other aircraft besides the new generation of advanced fighter aircraft now planned—but also in civil aviation. Already, much of the work done on the development of new techniques for military aircraft is spilling over into civil aircraft development and production, and this trend can be expected to accelerate in the years ahead.

What is also significant is that the forthcoming generation of new tactical combat aircraft will be the last such aircraft types this century in Western Europe—the costs of such developments will preclude any additional fighter aircraft programmes until well into the next century.

For that reason, what is being done now, under military budgets, to develop new techniques of manufacturing and in airborne technology, will be substantially what prevails in the aerospace industry for the best part of the next 20 years.

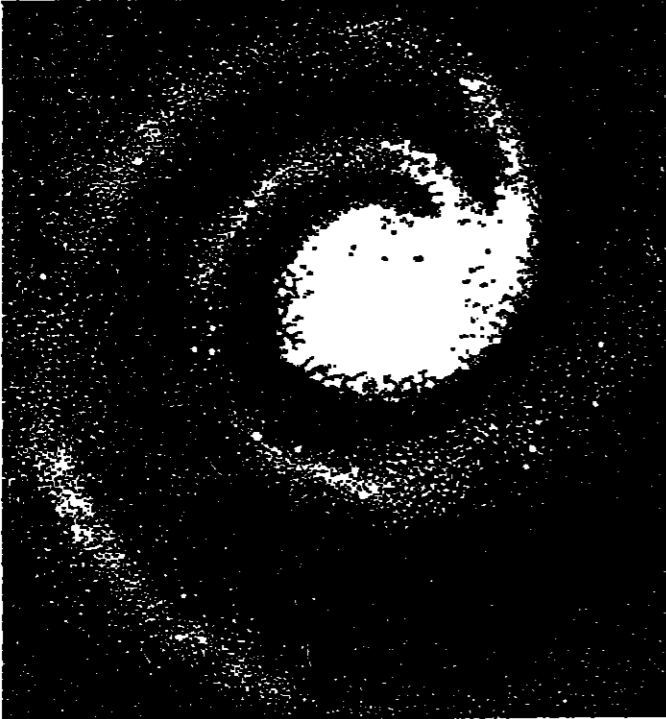
This simple fact is driving the aerospace industries of Western Europe hard in the search for new techniques of manufacture, new materials and new ways of flying.

While it would be wrong to suggest that, between now and the end of the century, there will not be substantial further advances in aeronautical engineering and technology, those that do emerge (outside the EAP and the Eurofighter) will probably have to be largely funded privately by the aerospace industry itself, for military research and development budgets will be severely restricted.

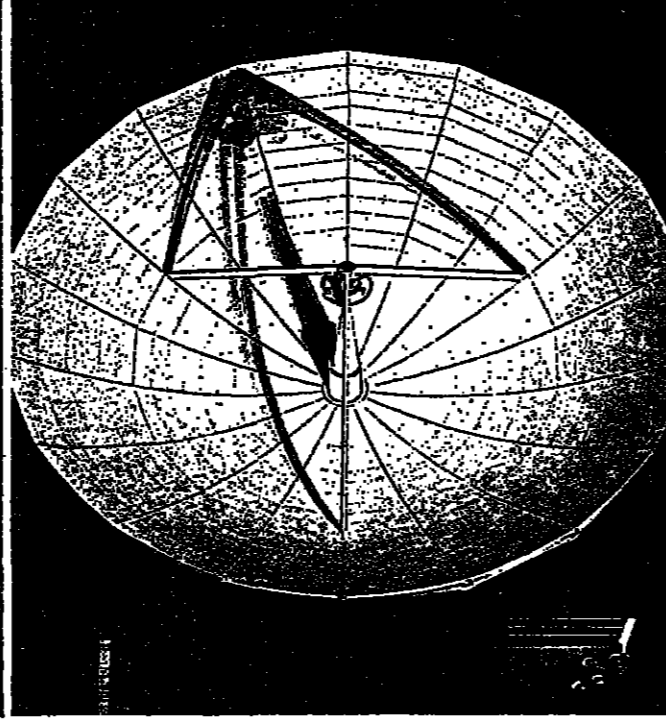
For this reason alone, the entire aerospace and ancillary industries in Western Europe are putting much faith not only on the EAP and the subsequent Eurofighter, but also on its rival in the French aerospace industry.

Michael Donne

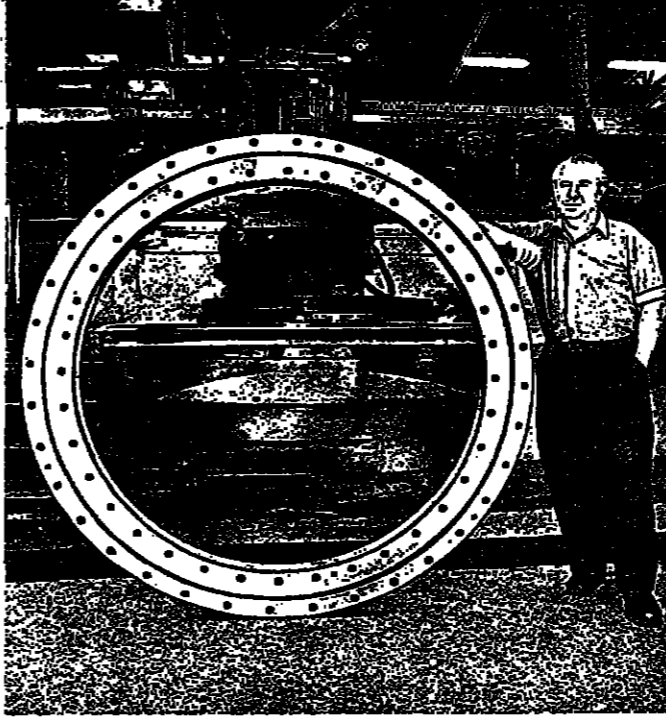
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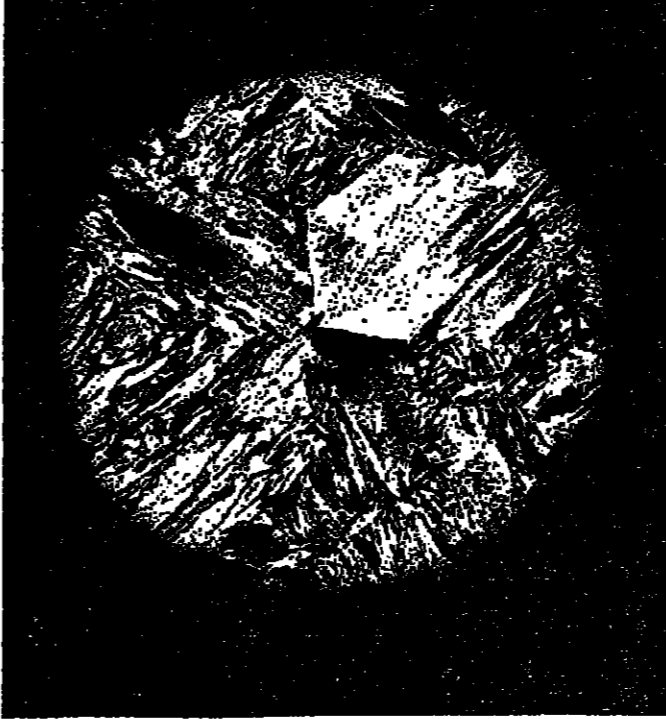
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cc 91

EUROPEAN HIGH TECHNOLOGY 6

Biotechnology

Tailoring to commercial needs

BIOTECHNOLOGY IS an amalgam of skills in cultivating live cells and micro-organisms developed to a high degree of perfection by the pharmaceutical industry in its search for new antibiotics, corticosteroids and vaccines. With the arrival of genetic engineering and monoclonal antibodies in the mid-1970s, opportunities emerged to tailor products more precisely to the commercial need, and to expand the horizons of biotechnology.



Gerard Fairtlough, chief executive of Celltech, the UK "bio-entrepreneur"

The companies which recognised clearly how long and costly was the journey to market for the products of the new biotechnologies were those which had already experienced the agonies of introducing the older ones. Those who spearheaded the drive to exploit the new biotechnologies, however, were entrepreneurs unhindered by earlier experience and driven only by their confidence of solving some of medicine's more challenging problems.

Those few who sought to marry experience with the new "cash flywheels" — something that would ensure steady revenue from biotechnology to meet the voracious appetite of the new science. ICI put its faith in a new animal feedstuff, Pruten, produced by the large-scale cultivation of a bacterium fed on methanol. Technically, it was a tremendous achievement but commercially it ran foul of a changing commodity market. A more recent attempt to create a cash flywheel has

come to grief in Sweden, where an entrepreneur, Mr Refaat el-Sayed, built his company Fermenta from under-utilised antibiotic production capacity. By 1985, the company although owned firmly in traditional biotechnology — was a stockmarket star and re-investing its profits in front-line biotechnologies. Then it ran foul of public opinion in Sweden.

"We were young, ambitious and naive... we were offered phenomenal salaries, taxes were low, ski slopes half an hour away," writes a researcher recruited by Biogen in Geneva.

Back in England, three years later, the scientist was accusing the new biotechnology firms of falling "to recognise the hype for what it is." They were selling dreams and believing their own propaganda, this disgruntled researcher told New Scientist.

Biogen was an attempt to repeat in Europe a formula pioneered in California for finding fast tracks to translate front-line science into profit. Interferon was its most exciting prospect and, scientifically, it achieved wonders in turning the discoveries of Zurich University into commercial products.

Clinically, however, interferon is proving a far more complex and troublesome agent to use than can be permitted in a cash flywheel. Far from proving a panacea for widespread influenza, each application is requiring painstaking research to establish a regime that may benefit a few patients.

No readily recognised pattern can be distinguished in Europe's progress with the "enabling technologies" of biotechnology. Nor is there any strong evidence yet of a common will to meet the evident threat of Japanese and US entitainment for the commercial potential.

European science offers some excellent opportunities — one is the work of the Pasteur Institute in France on the diagnosis and prevention of AIDS — but the best chance of success for European new biotechnology firms seems to lie in good deals

with US and Japanese companies.

Celltech, the leading British response to the crop of Californian bio-entrepreneurs, has secured in only five years a significant cash flywheel by applying UK academic skills in making monoclonal antibodies on a scale no-one else can yet match, and exploiting this talent in the US market.

The revenue helps sustain its cash-hungry research programmes for the development of novel pharmaceutical products. These, too, are based on the efficient transfer of science from academic establishments into Celltech's own laboratories. Still more important, perhaps, the revenue has helped to convince its shareholders that this is a genuine business and not just another "research boutique."

Celltech is the star of a small crop of perhaps two dozen new biotechnology companies in Britain born since 1980. Elsewhere in Europe such firms are rare. "We don't have too many proposals," acknowledges Mr David Leathers, investment director of Biotechnology Investments, the N. M. Rothschild trust specialising in biotechnology shares. Of about 30 unquoted investments, only two so far — in Belgium and Denmark — have been backed by the trust in the whole of continental Europe.

But Europe has several older-established biotechnology companies with world reputations in specific techniques, including Pharmacia in Sweden with sep-

aration technology sought by almost every new biotechnology company. Gist-Broekades is a research-based Dutch business specialising in enzyme technology, an enabling technology which it applies successfully to a spectrum of industrial activities from food processing to the clean-up of wastes. Novozyme in Denmark is known worldwide as a dependable source of insulin and of industrial enzymes, both requiring high biotechnology skills.

One new British biotechnology company, Agricultural Genetic Company (AGC), of Cambridge, has found European backing for its venture into the genetic manipulation of crops, to improve productivity, pest resistance, hardiness and freedom from disease. Its science is drawn predominantly from the government-funded Agricultural and Food Research Council. Its commercial backing includes such European groups as Danish Sugar and Ciba-Geigy, the Swiss chemicals company.

AGC is also a member of a new kind of consortium, that Britain is pioneering, to try to persuade the agri-food industry to take a longer-range view of research than it has done traditionally. Of the 15 founding members of this biotechnology research consortium, 11 are companies, among them such European multinationals as Ciba-Geigy, ICI, Royal Dutch-Shell and Unilever. The other four are British academic institutes, which are participating in a joint research programme funded equally by the 11 companies and the British Government.

The target of this research is a plant gene "toolkit" and user's manual, which would permit any user to make radical changes in the genetic make-up of some of Europe's more valuable crops. If it succeeds, the companies will be free to exploit the new enabling technology in any way they wish. The four crops are wheat, barley, peas and rape oil seed.

Other agri-food initiatives of the same kind are already afoot. One is a six-member club to study the technology of enzyme supplements for animal feedstuffs. Another — just a gleam in the eye at present — is a club that studies the limiting factors on the performance of crops.

David Fishlock



Cell culture processing to produce monoclonal antibodies

Materials

Industrial progress may depend on novel range

WHILE ERAS of industrial expansion over the past 200 years have been founded on applications of wood, metals and plastics, future progress in industrial activity may well depend on a range of materials, including novel forms of ceramics, polymer alloys and composites reinforced by exotic fibres.

The new materials are unlikely ever to replace the age-old traditional substances in every part of, say, a car, machine tool or computer. Increasingly, however, crucial and high-value components of such mechanisms will be made using relatively small quantities of the novel materials. These will be chosen either for useful structural properties, such as low weight and high strength, or for specific electronic characteristics not found in traditional substances.

Examples of such trends in important world markets include the growing use of carbon fibre composites in items such as structural components for aircraft, the arms of record players and co-ordinate measuring machines, parts of X-ray machines and high-strength fishing rods.

Ceramic materials, such as aluminium oxide, silicon carbide and silicon nitride, are finding applications in areas where high strength and good heat resistance are needed; for instance, in components of gas turbines and internal combustion engines.

New combinations of polymers, set in strong fibres such as aramid, are in wide use in the car industry for items like body panels, while novel electronic materials can be seen in crucial components of mechanisms, ranging from TV sets to military radar.

Where does Western Europe stand in novel materials? In the important area of engineering ceramics, which account for annual world sales of about \$600 million, Europe is some way behind the US and Japan, both in terms of use of the substances and in research and development machinery and domestic appliances.

In other areas — thermoplastic composites, for example — the picture is less gloomy. According to a recent survey of research in Europe, a London-based consultancy, the European car industry, particularly in West Germany, has made important strides in these materials in recent years. Applications of the substances may be starting to spin out from this sector into other areas of industry, including electrical machinery and domestic appliances.

In electronic materials, such as chemicals based on elements like gallium and indium for use in optical fibre transmission and other applications of optoelectronics, Europe is again in a reasonably good position. In theory, the continent's generally strong chemical industry should be well placed to move gradually into the development of other materials useful for their electronic properties: liquid crystals, used in computer displays, and small-screen TV sets, for example.

Of all the exotic materials that are finding novel applications around the world, engineering ceramics stand out as being particularly versatile. Many of which occur naturally and are defined as non-metallic inorganic crystalline solids with good heat resistance, have been used for thousands of years in applications, such as bricks and pottery.

Engineering ceramics are those fibres produced by non-traditional processes, and in which developments centre mainly on finding novel mixtures of elements to provide a substance of a chosen property. Using processes such as hot isostatic pressing (where granules of materials like

R & D spending on engineering ceramics (1985)

Japan	\$300
USA	100
West Germany	5
Sweden	0.5
UK	3
France	5

Source: IAL

mics in Europe are Hoechst Ceramtec in Germany, Rhone-Poulenc and Pechiney in France, and Morgan Matroc and Falrey Tecramics in the UK.

In the area of composites, fibres made from glass, carbon or aramid are used to reinforce other materials. Once again, composites are anything but new — straw-reinforced bricks and plaster laid on a mat of reeds have featured in buildings since prehistoric times. It is the combination of different types of materials in a wide range of composites that is new.

Usually, the fibre is embedded either in a thermoplastic (a polymer such as polyethylene, or a polyamide which softens on application of heat in a reversible process) or a thermoset plastic, such as an epoxy, which sets hard in an irreversible, curing process. Finding the right ingredients for a particular job can be a daunting challenge.

Frequently, computer-aided design is used to ensure the optimum layout of the reinforcing fibres in the mixture, to give a substance that is as strong and light as possible. Often, the novel substances are much more expensive than conventional materials such as metal or alloys, and such design methods permit them to be used sparingly but to maximum advantage.

Leading European companies involved in thermoplastic composites include chemical concerns such as ICI, Bayer and Baf (which provides the polymer base for the materials), and Spectral, Böhlerill and Harvey, Symalit and ATO (which produces either the woven reinforcement or the finished composite).

Aerospace and car companies, such as Aerospaciale, British Aerospace, Porsche, BMW and Audi, are also building up strengths in fabrication of the completed substance.

"Advanced Engineering Materials in Europe. Reports on Ceramics and Thermoplastic Composites. £6,000 for two reports. IAL 14, Buckingham Palace Rd, London SW1W 0QP. Peter Marsh



BASF invested DM 1.36m in R&D in 1983

THE EUROPEAN EXPERIENCE

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France and West Germany: Centre for Science and Technology, Paris (1985) £22.00
 West Germany: Centre for Science and Technology, Paris (1985) £22.00
 Belgium and Netherlands: Centre for Science and Technology, Paris (1985) £22.00
 Special prices are available for members of the European Science Foundation (ESF) and the European Association of Science Parks (EASP).

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EUROPEAN HIGH TECHNOLOGY 7

Government R & D Funding as % of GDP

Table with 5 columns (1981-1985) and 14 rows of countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Spain, Sweden, UK, US, Japan).

Research and Development

Greyhounds and tortoises of spending

Total R & D Spending as % of GDP

Table with 5 columns (1981-1985) and 14 rows of countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Spain, Sweden, UK, US, Japan).

TWO UNDERLYING fears frequently crop up when the future of science-based industries in western Europe is under discussion. The first concerns the type and amount of research and development carried out within the continent. The worry is that Europe may not be doing enough to replenish its reserves of scientific expertise, compared with Japan and the US.

spends yearly on R and D, the US, western Europe and Japan divide up the cake in the rough ratio 5:3:2. Of greater importance than this snapshot view of the statistics is that while Europe has been in recent years increasing its R and D spending at the plodding rate of 4 per cent annually, research investment in the US and Japan has been shooting up at about 8 per cent and 10 per cent a year respectively.

Under Eureka, companies from different European countries are due to work together on a series of projects in advanced technology, financed by varying proportions of government grants and cash from industry itself. So far, 26 individual Eureka projects have been approved, spanning technologies like computers, health care, lasers, factory automation and new materials.

work jointly on research projects related to electronics, which would be the main beneficiaries of the new programme. Of interest to R and D planners is that the amounts of cash put into the activity by private industry varies markedly from country to country. In Japan and Germany, businesses contribute about 60 per cent of total R and D; in the US, the figure is 50 per cent (and rising); while, in France and Britain, industry manages to stomp up only about two-fifths of the total bill.

Measures to persuade more industrialists — and their shareholders — that putting cash into research is an activity worth pursuing could pay off hugely in both France and Britain, both by increasing the total sums spent and in ensuring that a higher percentage of the total is geared to projects of real commercial significance. Measuring Europe's Technological Performance: Results and Prospects, by Pari Patel and Keith Pavitt, Science Policy Research Unit, Sussex University.

Peter Marsh



Robb Wilmot (left) and Robert Heikes, leaders of European Silicon Structures

Venture Capital

Fund crosses frontiers

VENTURE CAPITAL is held by European politicians to be a potentially important aid in attempts to catch up with the US and Japan in the commercial exploitation of high technology.

Having seen how US venture capital has played a part in the rise of such important companies as Apple Computer, Wang Laboratories or Compaq, Europeans are naturally keen to repeat the process at home.

In Europe venture capital is still in its infancy compared to its US counterpart, however, and unlike the US risk investment industry it faces the problem of how to help its small high technology investments to tackle the national barriers and differing technology standards within Europe.

The European Commission recently sponsored two transnational technology funds, but the idea of using venture capital to foster cross-frontier links between small high-technology companies or to form pan-European start-ups on a scale to compete with US equivalents generates more idealistic talk than action.

A notable exception came last year with the formation of European Silicon Structures, a \$65m European custom micro-chip start-up venture with operations in Britain, France and West Germany.

Led by Dr Robb Wilmot, former chairman of the British computer group ICL, with Mr Robert Heikes, head of the US group National Semiconductors' European operations, the enterprise raised funds in six European countries and is among the most visionary high technology risk investment ever attempted in the Community.

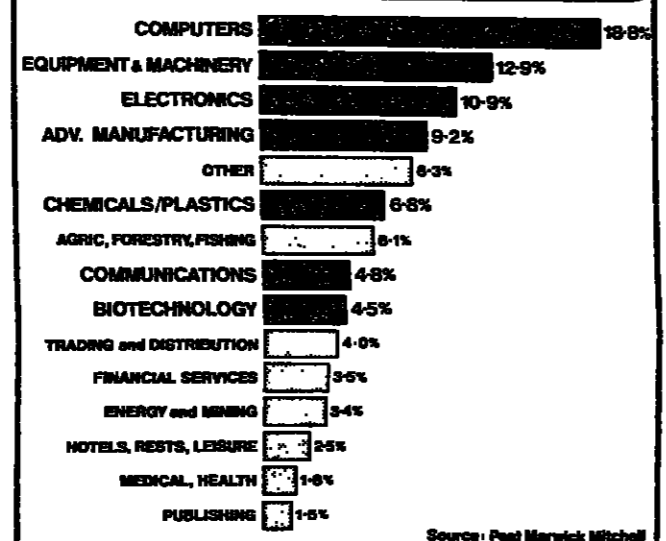
The impact made by European Silicon Structures was also a reminder of the venture capital industry's most often heard complaint: that good-quality technology investments are pitifully few.

Some more experienced funds are responding to this problem by creating their own deals, recruiting managers to put into effect an internally generated business plan. Advent, the London-based venture capital group, for instance, took a large part in putting together European Silicon Structures as well as investing in it.

But not many other European venture capitalists have the experience to do more than appraise whatever investment proposals happen to drop on their desks.

The perceived shortage of good quality proposals is illustrated by a survey by the European Venture Capital Association, which estimated that a little over half of the Ecu 7bn (\$4.3bn) of venture capital available in the community was actually invested in small businesses. The report said that although syndication of invest-

Investments by Industry Sector



and machinery with 13 per cent, electronics with 11 per cent, and advanced manufacturing techniques with 9 per cent. Some critics argue that while European universities and research establishments are teeming with bright ideas, the problem is that venture capitalists are too averse to risk. Just how difficult it is to encourage investors to take the kind of risks required for technology funding is shown graphically by the teething pains experienced by the UK Business Expansion Scheme. Set up in 1984 to foster individual risk investment by offering private investors tax relief for backing unquoted ventures, the BES followed the troubled Business Start-Up Scheme, which was disbanded because it was so restrictive that it attracted scant interest. The BES certainly attracted more interest than its predecessor — £241m invested in 1,400 companies in the BES's first two years—but only a small fraction of that has gone into the riskier high-technology investments. Meanwhile, a growing proportion of British institutional (as opposed to individual) venture capital is being attracted by the current fashion for management buy-outs of large established ventures, typically with no technology risk. Buy-outs took 38 per cent of UK venture capital last year, up from 23 per cent in 1984, according to the research consultancy Venture Economics. The danger, says Venture Economics, is that the opportunities to make quick profits afforded by buy-outs could divert investment away from early-stage ventures, which could be bad news for entrepreneurs, seeking to finance the commercial exploitation of new technologies.

Will Dawkins

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EUROPEAN HIGH TECHNOLOGY 8

Collaboration

Sceptics set for fight

EVERYONE AGREES on the problem but few can agree on the prescription. That is the classic dilemma for European co-operation on research and development in new technologies.

Europe is in danger of falling far behind the US and Japan in the development of advanced technology, whether computers, bio-technology, or telecommunications. Over five years, the US is likely to spend about Ecu 1,000bn (almost the same figure in dollars) on research and development, Japan about Ecu 330bn, and all the 12 member states of the EEC combined about Ecu 430bn. In per capita terms, the Community is far behind.

The European Commission argues that part of the solution is a big expansion of co-operative programmes financed from the Brussels budget, designed as a seedbed for other projects across the Community. It plans to more than double research spending in the budget, from the present Ecu 3.7bn from 1984-87, to a five-year programme costing Ecu 10.3bn in 1987-91.

The response of at least three key member states has been sceptical. Britain, France and West Germany—the three who will end up as the major contributors—are likely to try to cut these plans back by at least half. That battle is set to rage in the EEC Council of Research Ministers for months.

The sceptics have two major criticisms: they fear the hand of the Brussels bureaucracy, compounded by institutionalised multi-national decision-making; and they are dubious about the merits of simply pumping public money into officially-inspired programmes in the first category, and was the original inspiration of the alternative Eureka programme, designed against the opposition of Brussels to be an inter-

government programme outside the EEC system.

Britain shares that concern—and the government also doubts the wisdom of simply "throwing money at the problem." They believe the answer for European R & D is to improve the competitive environment for high technology industries, so that the private sector will invest without needing any money from the state.

The Commission does have support from many of the other member states, including Italy and the Benelux countries. They see the position of the "Big Three" as national self-interest of countries which would be carrying out high technology research anyway, and do not want to share it.

The argument they put forward is that, in the words of the Commission, "no single European country, however big, is capable of facing up to today's technological challenges on its own."

There is, moreover, a division of opinion in the UK about the merits of European research programmes. More comes back to Britain than the Treasury pays out, because more research-based companies are based there. An increase in the research budget would therefore be one way of reducing Britain's net contribution to the Community.

The Commission strongly rejects accusations of excessive bureaucracy, or that it is proposing anything excessive in absolute spending on co-operative programmes.

To get around the rigid lines of responsibility between different divisions, it created the Information Technology Task Force under Mr Michel Carpentier, with the prime objective of promoting its flagship programme: Esprit (the European Programme for Research and Development in Information Technology).

Most participants have been enthusiastic about the achievements of Esprit, intended to finance co-operation schemes for pre-competitive research: at one remove from development for the market.

It was initiated by the Commission and 12 key companies in the industry in 1982—Bull, CIE and Thomson of France, AEG, Nixdorf and Siemens of West Germany, GEC, ICL and Plessey of the UK, Olivetti and STET of Italy, and Philips of the Netherlands.

The research covers five key areas of advanced micro-electronics, advanced information processing, software technology, office automation and computer integrated manufacturing. The budget for the first phase (1984-88) is Ecu 1.5bn, of which 50 per cent comes from the participating companies and 50 per cent from the EEC.

The sort of achievements since Esprit was launched in February 1984 include:

- Development of a Gallium Arsenide chip by a consortium of semiconductor manufacturers, including LEP (France), Plessey (UK), Siemens (Germany) and Thomson-CSF (France). This has lower power consumption and higher speed circuitry than the traditional silicon chip.
- Establishment of the first European standards for multimedia message handling—the Office Document Architecture, and Office Document Interchange Format.
- A breakthrough in the design of digital signal processing chips, known as a silicon compiler, a software programme which automatically converts specifications into an operational chip in less than one week.

Esprit has created the environment for further co-operation, and the atmosphere of mutual trust, which has enabled someone like Mr Robb



The Barclays Centre on Warwick science park, where private capital has linked with a UK university

Without to launch ES2 (European Silicon Structures)," says Mr Carpentier.

"Esprit is not enough. It is one good thing for the promotion of new technologies. Now it might find the right market conditions."

The second phase of Esprit, which the Commission wants to bring forward, would be closer to the market place in terms of project selection—as Eureka projects are supposed to be.

However, other work needs to be done in removing barriers to trade, which is the fundamental job of the Common Market. Agreeing on common standards for new technologies is therefore another prime function of the Task Force.

The latest programme to be launched is Esce—Research in Advanced Communications for Europe—with a definition phase started last December with 31 projects costing Ecu 40m. The aim is to agree a common basis for the telecommunications system in Europe for the future—wideband communications in which voice, data, visual and text transmission will be integrated.

The intention is to define the technologies to make broad-

band communications a reality by 1995, bringing together the state telecommunications bodies, manufacturers, broadcasters and university researchers.

The Commission also has Brito in its clutch of acronymic programmes to promote—Basic Research into Industrial Technologies—and a bio-technology support programme.

The new framework programme is intended to shift the emphasis much more on to such programmes concerning industrial competitiveness.

The present programme allocates 47 per cent of funds to energy programmes, including nuclear energy and alternative sources. That will come down to 24 per cent in the Commission's plans.

Information technology, telecommunications, bio-technology and marine technology would take 60 per cent of the new funds compared with 28 per cent of the old.

What has to be resolved is the amount of cash member states will make available, and the relationship between Eureka (as yet rather vague) and the EEC programmes.

Quentin Peel

Industry/Academic Relations

Speed of change and cash needs forge links

IN RECENT years, techniques to improve the flow of ideas from the academic environment to the world of industry have come under immense study all over Western Europe.

Industrial managers, politicians and local authority planners have all found they have an interest in assisting the transfer of these ideas, to bring about wealth-creating new businesses and broader novel approaches into existing industry.

One factor behind this trend is the pace of technical change. In a number of areas, such as micro-electronics, biotechnology and the study of the physics and chemistry of materials, even the biggest companies have found it difficult to keep up with these advances using their own laboratory resources. Hence the moves by such companies as ICL in Britain, Siemens in Germany and Electrolux in Sweden to strengthen links with university research groups, in a bid to bring to their research firms linked with their existing operations' new technical approaches.

It can often be in the interests of the universities themselves to seek closer contacts with companies, both to keep their research firms linked with the needs of the outside world and to earn useful cash through industrial contracts. In the UK, Surrey University is among several academic institutions that have set up a research "club" to which individual companies can belong for a set yearly fee.

The commercial concerns, which in Surrey's case include international businesses such as BOC, Grand Metropolitan and the Kuwait Oil Company, can gain quick access to research results from the university department and can engage academic staff for one-off consultancy contracts.

Another way in which ideas from the academic world can reach the arena of industry is for the academic concerned to set up a new company to commercialise a novel strand of research.

With one eye on the record of the US, where academics generally find it relatively easy to move into business (and where

the notion of a university researcher, with his own part-time company, is far from unusual), governments in Western Europe have been generally keen to encourage this type of activity.

According to Dr Nick Segal, a UK consultant specialising in high-technology companies, success by university-trained scientists and engineers in setting up in business has several effects not related simply to the economic activity in which they are engaged in the new enterprise. The success of such men and women in a new area such as computers can, he says, change people's attitudes to manufacturing activities by showing that industry can involve the very latest ideas.

Another effect is to demonstrate to people in traditional areas of industry that not all academics are interested simply in research for the sake of research.

As a result, industrialists may be less inclined to treat university employees as "boffins" with little regard for such areas as marketing and product-development, and may be more willing to make use of their ideas.

In a pattern that is now extremely visible across Western Europe, local government departments and academic establishments are becoming keener to assist the mechanism of technology transfer by the vehicle of "science parks." The name applies to any kind of industrial estate built near to a university or polytechnic campus, to house commercial organisations.

The ideal notion for a science park is that ideas and people from the technology and science departments of the university will spill over to the companies on the estate, helping the development of existing concerns or enabling new ones to set up. Often, the park (sometimes called "innovation centres" or "technopoles") may be planned with the aid of banks or venture capital groups, which can provide start-up cash to new businesses.

According to a recent set of studies from the Currie Sumner Partnership, a UK consul-

tancy, the number of parks in five West European countries increased almost fivefold between 1980 and 1985, from 10 to 47; while the number of reports* were Britain, France, West Germany, Belgium and Holland.

According to Currie Sumner, the chief motivators for the parks are local authorities, which see new businesses starting up from such ventures as providing wealth and employment that can, at least partially, compensate for the decline of established areas of manufacturing industry.

The science parks are not only places for small firms to operate. Nixdorf, the big German computer concern, has set up a large office on a science park in Berlin as a way of getting closer to research ideas at the city's university. In France, Bull and Thomson are among the companies associated with a science park at Metz; while a batch of multi-nationals, including Dow and Digital Equipment, have based on one of France's best-established ventures of this kind, the grandly named International Activities Park, at Valbonne-Sophia Antipolis, near Nice.

Another sign of science parks' attempt to bridge the gap between the big and small sectors of industry is the centre set up in Britain by Manchester University.

Four large concerns, Ferranti, Granada TV, Ciba-Geigy, and Fothergill and Harvey, each have a small stake in the company running the park. The idea is that the little companies that take space on the park will strike up links not just with departments of the university, but perhaps with the bigger, fry

* Studies on Science Parks: Belgium, Netherlands, France and West Germany. Total price £230, available from Currie Sumner Partnership, Centre 15, Heol-y-Parc, Penryn, Cornwall CF4 8ND.

Peter Marsh



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Impetus for collaboration

CONTINUED FROM PAGE 1

advantage of the Common Market.

Breaking down the long-standing barriers which have isolated European companies from each other as well as fragmenting their national markets is an explicit objective of Europe's rash of high-technology initiatives. All of them aim to achieve it by fostering closer industrial collaboration.

Esprit, the first of Europe's collaborative projects, has proven effective in creating new links between companies and academic and research institutions, requiring regular personal contacts between participants in different countries. Indeed, some of those involved believe that the benefits gained from establishing these lines of communication will exceed any technological advances achieved by the Esprit projects.

Esprit is, in any case, aimed at strengthening pre-competitive research which is not geared to specific commercial products. As a consequence, it does not attempt to address European companies' most obvious weakness: inadequate economies of production and marketing scale.

Eureka, on the other hand, has been conceived as more of a "downstream" operation, intended to encourage companies jointly to develop new products with a clearly defined market application.

Whether this is a feasible goal is uncertain. Certainly, there has been a rash of applications

from all over Europe to participate in Eureka. More than 100 projects have been submitted, about two-thirds in the field of information technology.

But many aspects of the programme are still unclear, not least what it means to be a Eureka project. Some companies say it amounts to not much more than being on a priority list for subsidies from their national governments. Moreover, several projects are turning out in practice to be little more than pre-competitive research because of reluctance among the companies involved to disclose commercially sensitive information.

A more fundamental question is whether Europe is pinning too many hopes on industrial collaboration and placing insufficient emphasis on creating more vigorous competition as a way of strengthening its high-technology industries. Though Eureka pays lip service to the idea of more open markets, it contains no formal mechanism for achieving them.

Direct competition between Europe's high-technology companies in each other's markets has been severely limited until now. In part, this has been due to nationalistic procurement policies which have erected protective barriers around defence and telecommunications, two of the largest markets for electronic equipment.

However, many European companies have been equally timid about venturing into neighbouring markets for products such as computers and semiconductors, where few

formal barriers exist. That has left the way open to their more aggressive American competitors to sweep the field.

This reticence appears to have much to do with deeply ingrained management attitudes in European companies, which have preferred to stick with the comfortable security of familiar home markets rather than engage in foreign adventures involving a substantial degree of risk.

There are signs that this may be starting to go to change. Italy Olivetti, in particular, has been expanding aggressively on both sides of the Atlantic and is now the world's third largest personal computer manufacturer. Siemens, too, has begun to make a determined effort to enlarge its presence in Europe and the US.

It remains to be seen whether government-sponsored collaborative schemes will advance or retard these trends. On the positive side, there is a good deal of evidence that they have played a useful catalytic role, imparting an increased sense of urgency to Europe's efforts in high-technology and stimulating new patterns of behaviour among its industries.

But there is also a danger that they could degenerate into cosy inward-looking clubs, the main function of which was to attract public subsidies while subsidising their members from the painful realities of risk and structural adjustment. So far, at least, collaboration in Europe has conspicuously worked only when nobody has had to make any sacrifices.

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SECTION II - COMPANIES AND MARKETS

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CREDITS AND EURONOTES

Turkey backs \$125m debut with letter of credit

TURKEY is planning to enter the Eurocommercial paper market for the first time. It has mandated Bankers Trust International to arrange a \$125m, one-year renewable loan facility to back up issues of paper which will be guaranteed by Fuji Bank, writes Peter Mousagnon in London.

Because Turkey is not a name that would stand up on its own in the commercial paper market, it has borrowed a technique prevalent in the US, where lesser-rated borrowers seek to have their paper backed up by a letter of credit from a commercial bank. Turkey already issues paper in the US, where it has two programmes totalling up to \$350m.

Table with 4 columns: Primary Market, Euro, FRN, Other. Rows include US\$ 4,488.8, 708.8, 682.2, 2,812.7 and other values.

One of the striking aspects of the deal is the speed with which Turkey has moved to renegotiate the terms of a facility arranged as recently as early this year. Bankers say its ability to do this reflects the continuing demand from banks for short-term business in a market that generally remains starved of good opportunities.

CDP-Chimie is paying an annual fee of 1/4 per cent for its operation which is divided into two equal tranches. The first, carrying a margin of 1/4 per cent, must be fully drawn before the second is used. This carries a higher margin of 3/4 per cent.

announced last week. L. M. Ericsson, the telecommunications equipment group, is raising up to \$100m through a programme for which Enskilda Securities, Shearson Lehman, Svenska International and Swiss Bank Corporation International will act as dealers. Enskilda is also dealer for a \$50m programme for Perstorp, the speciality pharmaceuticals manufacturer.

Wood Gundy-Gordon merger cancelled

A PLANNED merger between Wood Gundy and Gordon Capital Corporation to form Canada's biggest securities firm has been called off. The two Toronto-based companies said in a brief statement that they had "been unable to reach a mutually satisfactory agreement."

INTERNATIONAL BONDS

Managers respond cautiously to hopes of interest rate cuts

"NICE and easy does it" seems to be the watchword in the new issues business at the moment, with economic data suggesting bullishness but the imbalance between supply and demand in the Eurobond market clearing caution, writes Clare Pearson in London.

cent fixed-rate deal for Liberty Mutual, the triple A rated US insurance company, it saw fit to obtain the agreement of co-managers on pricing first. This resulted in a hefty initial 85 basis point yield margin over comparable US Treasury bonds.

from banks in the syndicate. Overall, the facility will not only be cheaper than the bankers' acceptance deal that it replaces, which carried a commission of 1/4 per cent, it will also be more flexible.

Short-term rates are stubbornly high, at about 5 per cent on three-month Eurodeposits. In this context, traders are unable to move much recent paper. With the interest-rate outlook so uncertain, the limited amount of end investor interest is concentrated on shorter-term paper.

standard SFr 125,000 for out-of-pocket expenses. At the 2 1/2 per cent level they are about 1/2 per cent below a theoretical charge based on scaling back charges for traditional public bonds, all of which were for eight years or more.

Jordan plans to borrow \$200m in Euromarkets. JORDAN expects to tap the Euro-markets for a medium-term balance-of-payments loan later this year, for the third consecutive year, senior government banking sources said.

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SOLVAY in 1985: Once again a good year for the Group. Profit maintained at the 1984 level. Dividend increased. Key figures table. Innovative production methods. A strategy for expansion. Progressive diversification into more profitable sectors. Illustration of a man in a lab coat with scientific equipment.

INTERNATIONAL CAPITAL MARKETS

US MONEY AND CREDIT

Stage set for Fed to ease policy stance

SHORT AND long-term interest rates edged lower again in the US last week, continuing a four-week rally in the credit markets spurred by a weak domestic economy and growing expectations of an early Federal Reserve Board discount rate cut.

US MONEY MARKET RATES (%) table with columns for instrument, last Friday, 1 week ago, 4 wks ago, 12-month high, and low.

US BOND PRICES AND YIELDS (%) table with columns for instrument, last Friday, 1 week ago, 4 wks ago, and yield.

Long-term Treasury bonds posted a full 2 points gain on the week, helped by renewed evidence of Japanese buying. Overall government bond prices advanced by between 1 and 2 1/2 points sending yields back down close to their mid-April lows.

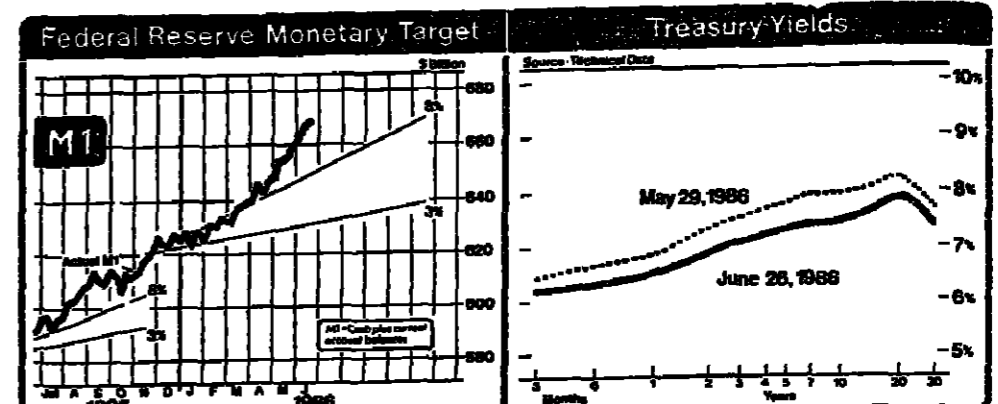
major currencies—particularly on Friday in the wake of the May US trade deficit data. But the trade statistics provided another piece in the Fed watchers' jigsaw puzzle—a piece that most agreed should push the Fed further along the easing path.

constrained to head off damaging protectionist legislation by initiating another round of accommodation aimed at stimulating domestic economic growth and bringing down the value of the dollar.

That means fiscal policy will be shifting from its recently strongly expansionary path at the same time that domestic US economic and other considerations in themselves argue for a Fed easing.

appears to be making some headway with its efforts to reduce the Federal budget deficit—and put in place a new simplified tax code.

Significantly a number of senior economists, including Dr Kaufman, apparently no longer consider interest rate cuts abroad, specifically in Japan and West Germany, a prerequisite for a US discount rate cut.



consider interest rate cuts abroad, specifically in Japan and West Germany, a prerequisite for a US discount rate cut. Even though dollar weakness may act as a Fed constraint, the stage seems set for the Fed to ease its policy stance, with or without matching international moves.

UK GILTS

Concern grows over pace of funding

AFTER A firm start, the UK gilt market edged back by the close of the week. Progress was good enough to exhaust the Government Broker's four £150m tranches, issued at the end of the previous week, and to pave the way for three new tranches to be announced on Friday.

With British Gas on the horizon, this could start to cause problems. From the Bank's point of view, however, the gross profile of gilt-edged funding appears to be on course, and the apparent under-funding in the early months of the financial year simply reflects the recent bunching of stock maturities.

UK's relative interest rates would have to stay high to keep sterling strong. None of this indicated any change in the approach to the "awkward choices" that the Bank says confront policy makers, but it was a further sign of caution from an institution that was already cautious about the build-up of liquidity in the economy.

The Treasury created another £150m each of 10 per cent Treasury 1992, 8 1/2 per cent Treasury Loan 1997, and 9 1/2 per cent Conversion 2004. The range of stocks was similar to the previous week—even including one issue free of tax to residents abroad—as was the message from the authorities of a steady approach to funding, but the tapers still depressed the market late on Friday.

Those with tax losses in the conventional sector to establish before July 2 took advantage of the opportunity to switch into the top stocks on Tuesday and Wednesday last week. Some with index-linked losses, for example on the three £100m tranches exhausted in late May, may be tempted to wait until the last minute in case the sector falls further.

Let us grow biased about the effects, should this liquidity find its way into the wrong channels, the Bank distinguished the possible consequences. Industrial and commercial companies, it warned, might use the funds they have built up to finance high pay settlements; financial institutions might switch their money abroad, thus damaging the exchange rate; and personal sector liquidity could seep into extra consumption.

Some analysts have begun to show concern over the Government's funding programme. Net gilt sales so far in the financial year are little more than £15bn, and analysts calculate that they will need to amount to £55bn to £60bn a month for the rest of 1986-87 if the public sector borrowing requirement is to be fully funded.

The message that unit labour costs are rising too fast is not a new one for the Bank, though it was spelt out with renewed precision. So long as British unit labour costs continue to grow even faster than those of more inflation-prone competitors, the Bank argued, then pressure would have to be maintained on employers to grant lower wage settlements.

The markets, meanwhile, continue to look overseas for a spur to the next, long-delayed base rate cut. George Graham

FT/AIBD INTERNATIONAL BOND SERVICE

Large table listing international bond services with columns for instrument, price, yield, and other details. Includes sections for US DOLLAR, UK GILTS, and various international bonds.

The Hongkong and Shanghai Banking Corporation advertisement. Includes the company logo, name, and a list of international branches and subsidiaries such as Bank of China, Citibank, and others.

Application has been made to the Council of the Stock Exchange for the Notes, to be issued at 100 per cent, plus accrued interest (if any) in bearer form in denominations of U.S.\$100,000 and U.S.\$5,000, to be admitted to the Official List. Interest will be payable quarterly in arrears in October, January, April and July, the first such payment being in October, 1986.

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June, 1986

U.S. \$350,000,000



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INTERNATIONAL CAPITAL MARKETS AND COMPANIES

Ameritech allowed to manufacture overseas

By Paul Taylor in New York

AMERITECH, one of the seven US regional Bell Telephone holding companies, which is based in Chicago, has won a court ruling allowing it to manufacture telephone equipment overseas.

Meanwhile the US Justice Department has approved the planned long distance telephone service and data communications joint venture between GTE and United Telecommunications.

GTE is currently negotiating a separate US joint venture agreement covering the telephone equipment business with Siemens, the West German electronics and electrical group.

Ameritech's green light to begin manufacturing overseas appears to enhance the prospects for the seven regional holding companies' attempts to win equipment and consulting contracts in overseas markets.

The court judgment represents further significant change to the rules under which the regional telephone companies have operated since they were spun off from American Telephone & Telegraph at the start of 1984.

Since then, the regional telephone companies have steadily diversified their businesses away from simply providing local telephone service and into such areas as mobile communications, publishing and property.

US microchips hit by fall in orders

BY LOUISE KEHOE IN SAN FRANCISCO

A SHARP decline in orders has the US semiconductor industry worried that its recovery may have stalled. After seven months of slow but steady improvement, "the phones stopped ringing" last month says one of the country's largest semiconductor distributors.

Leading manufacturers agree that they, too, have experienced a significant decline in new orders for chips. Combined with the normal seasonal slow-down, the new market softness will produce another quarter of losses for manufacturers, industry analysts predict.

"The recession will not be over until major computer manufacturers start placing orders," says Mr Donald Bell, president of Keiruluff Electronics, a large US electronics distributor, but industry executives believe that it is unlikely to happen until the fourth

quarter. "The US semiconductor industry will not be able to sustain any significant growth rates until the office and computer industry recovers from its doldrums," says Mr Jack Beedle, President of In-Stat, an industry market research firm.

"The facts remain that the office and computer industry in the US — the end user market that consumes the largest amount of semiconductors in the US — is still trending down."

US computer manufacturers' sales will be down this year, In-Stat projects, the first downturn in the office and computer industry since the mid-1970s when sales dipped from \$7.2bn in 1974 to \$5.7bn in 1975.

This year's decline will bring US computer manufacturers' sales down from \$17bn in 1985 to just over \$14bn, In-Stat estimates, while semiconductor

shipments to the computer industry will be down by 12.4 per cent.

"It appears that the rapid increase in semi-conductor orders during the first part of the year was primarily for inventory replenishment at the distributor and small manufacturer level, as well as some orders placed in anticipation of price increases," says Mr Beedle.

The industry is still suffering the after effects of a sales boom in 1983-84 which left many customers holding big stocks of unused chips. Large computer manufacturers, such as IBM, have still to re-enter the market by placing long-term orders.

Supply and demand of semiconductors are unstable, according to Mr Steve Zelenick, senior vice president of Advanced Micro Devices, a prominent US

chip maker. A customer might order parts one week and find that they are available in a month, then order the same parts a week later only to find that they are not available for three months, he explains.

The instability is, however, a signal that supply and demand are beginning to get back in balance, Mr Zelenick believes. He expects to see customers placing long-term, high-volume orders in the fourth quarter.

Industry leaders are pinning their hopes on the fourth quarter as the beginning of a "true" recovery in the semiconductor market. Although 1986 will certainly be better than 1985, when sales fell by a disastrous 30 per cent, latest projections of this year's performance for the US industry peg sales growth at a meager 3.5 per cent to 5 per cent.

Dallas bank resubmits bid for BancTexas

BY MARY FRINGS IN DALLAS

BANCTEXAS, the state's 10th largest bank, which has run into financial pressure as a result of its extensive loan portfolio to troubled energy companies, appears to have become the object of a battle for control.

Mr James L. Huffines, chairman of the family-owned Dallas Bancshares Incorporated, said over the weekend that he has resubmitted an offer for the BancTexas group, despite the announcement of a tentative agreement between BancTexas and the Ford bank group.

Mr Huffines has not disclosed the terms of his competing offer. Dallas Bancshares is the

holding company of Bank of Dallas, the city's second largest independent bank. Since its formation in 1984 the company has purchased three other small banks and is seeking additional acquisitions.

BancTexas has had a number of proposals, including one from the Hallwood Group, a little-known New York merchant banking firm which is also holding talks with First Oklahoma Bancorporation.

The restructuring plan put forward by Mr Gerald Ford, who controls 25 banks in Texas and New Mexico with total capital of \$2.2bn, is entirely conditional on Federal Deposit

Insurance Corporation assistance of a kind normally extended only to failed banks.

BancTexas is not yet in that situation, and analysts believe the FDIC will wish to examine less costly alternatives before the August 15 deadline.

The plan involves the infusion of \$30m of capital provided that the Ford Bank group can raise \$25.5m in new funds, of which up to \$10m may come from a rights issue to present BancTexas shareholders.

A number of legal actions are in progress, including a damages suit brought by a group of shareholders against

Mr Edward C. Nash, who resigned as chairman and chief executive in August last year, and other directors of the bank, over the board's rejection of a \$5 a share takeover bid by Texas Commerce Bancshares in late 1983. BancTexas shares are currently quoted at \$1.

The Ford offer includes only BancTexas Dallas, which would be merged with Ford's United National Bank, and six other banks in North Texas, although Mr Ford has said he would consider acquiring one or more of the four Houston banks if that were necessary to satisfy the FDIC.

Loral launches \$860m offer for Sanders

BY WILLIAM HALL IN NEW YORK

LORAL, the fast-growing US defence electronics company, has launched a \$860m bid for Sanders Associates, a larger but less profitable rival.

Loral is offering \$44 a share — half in cash and half in paper — for Sanders, a New Hampshire-based maker of computer graphics devices and countermeasures systems designed to confuse enemy electronics. Much of Sanders' business is with the US Navy. While Loral's main customer is the Air Force.

Sanders described the bid as

inadequate and its shares jumped by \$15.75 to \$50.50 on Friday, indicating that Wall Street expected a higher offer to emerge.

Loral, which is based in New York, makes radar, field radios and other electronic equipment. It earned \$53m on sales of \$664m in its last financial year.

Sanders Associates grew rapidly in the 1970s and early 1980s but its earnings peaked two years ago at \$49m. Last year it earned \$37.1m on sales of \$888m and analysts expect it to report lower earnings in

its current year, which ends next month.

THE HONGKONG and Shanghai Banking Corporation has taken over Global Union Bank, a small New York bank owned by the Hong Kong-based Tung shipping family.

Hongkong and Shanghai, which has been expanding its banking interests in New York's China town, announced on Friday that it would acquire Global Union's assets and assume Global Union's \$43.3m in deposit liabilities. Global Union has a branch in the lower

Manhattan financial district and another in Chinatown. The two branches will expand its New York city network to 10 branches, Hongkong Bank also owns 51 per cent of the New York-based Marine Midland Bank.

Mr C. C. Tung, chairman of Global Union Bancorporation, said that he "heartily welcomed" the agreement with Hongkong Bank and believed it "will provide continuity of service to our depositors and will be beneficial to the Chinese community in New York."

NEW INTERNATIONAL BOND ISSUES

Table with columns: Issuance, Amount, Maturity, An. Int. Rate, Coupon, Price, Book Name, Offer Yield. Includes sections for U.S. DOLLARS, SWISS FRANKS, CANADIAN DOLLARS, AUSTRALIAN DOLLARS, YEN, LIRE, and DEM.

* Not yet priced. † First issue. ** Private placement. † Floating rate issue. ‡ With equity warrants. (a) 1/2 over 2 1/2 Libor. (b) 1/2 over 3 1/2 Libor. (c) 5m Libor + 42bp. (d) Deferred coupon, 8 1/4% first 2 years. (e) 5m Libor + 2 1/2 Libor. (f) 5m Libor + 10bp. (g) 5m Libor + 10bp. (h) 5m Libor + 10bp. (i) 5m Libor + 10bp. (j) 5m Libor + 10bp.



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30th April 1986

INTERNATIONAL APPOINTMENTS

Unexpected shake-up in management of Seagram

By Bernard Simon in Toronto

SEAGRAM COMPANY, the world's largest drinks group, has appointed Mr David Sacks as president and chief operating officer following the unexpected resignation of Mr Phillip Beekman.

Mr Edgar Bronfman, the group's chairman, ascribed Mr Beekman's departure to changes in the liquor industry which "have dictated a shift in the company's marketing strategies and practices away from those of standard consumer goods."

Prior to joining Seagram in 1977, Beekman, aged 54, was president of the international division of Colgate-Palmolive, the personal hygiene products manufacturer. Mr Bronfman said Mr Beekman had convinced him that "solutions to our current challenges lie outside his field and he would be more professionally comfortable in another area where his recognised skills are more applicable."

The company said in New York that personal differences had not played a role in Mr Beekman's resignation. None the less, it is an open secret that tensions within Seagram rose after the publication of a cover story in Fortune Magazine earlier this year about the growing influence in the company of Mr Bronfman's son Edgar Jr, aged 30.

Mr Bronfman said in an interview that Edgar Jr would succeed him as chief executive, drawing a response from the company's deputy chairman and his brother Mr Charles Bronfman that the succession should be determined by the full board of directors and not by the elder Bronfman generation.

Seagram, with head office in Montreal but its main business offices in New York, has had to contend with an increasingly hostile environment towards its products, reflected in a recent dispute with American television networks which refused to accept its advertisements.

The company has had limited success in an expensive commitment recently to the US table wine market. Operating income from wine and spirits slipped by 15 per cent in the three months to April, despite an 8 per cent increase in sales. But total net income more than doubled to US\$99.4m, thanks to improved earnings from the chemical group. E. I. du Pont de Nemours, in which Seagram has a 23 per cent interest.

Mr Sacks, 62, has been executive vice president for finance and administration since joining Seagram in 1983. He was previously a partner of the US law firm, Simpson Thacher and Bartlett, and chief administrative officer of Lehman Brothers Kuhn Loeb.

New chief at Norfolk Southern

By William Hall in New York

MR ARNOLD B. McKinnon, aged 58, is to take over as chief executive of Norfolk Southern, the big US railroad which is facing fierce opposition in its attempt to buy Conrail from the US government.

Mr McKinnon, currently executive vice president marketing, will become chairman and chief executive when Mr Robert B. Clayton retires at the end of the year. Mr Clayton has headed the group since the consolidation of the Norfolk and Western Railway and the Southern Railway in 1982.

The appointment surprised many Wall Street analysts since it had been assumed that Mr Harold Hall, the group's president and chief operating officer would become chief executive on Mr Clayton's retirement.

Mr McKinnon joined the Southern Railway system in 1951 as a lawyer and worked his way through the legal department. After the merger of the two railroads he took charge of marketing, which has become an increasingly important position following the deregulation of large parts of the US transportation industry.

Swiss Bank Corporation restructuring

By John Wicks in Zurich

MR WALTER G. FREHNER is at the start of 1987 to take over the newly-created post of management chairman of Swiss Bank Corporation, of Basle.

The new chief executive, who is 58, is currently a general manager of the bank and a member of its executive committee. His appointment as management chairman forms part of a major restructuring at the top of SBC, Switzerland's second biggest banking group.

This foresees the abolition of the executive committee, which is currently made up of the bank's seven general managers. It is to be replaced by another management system. Apart from the general managers, this will be manned by six deputy general managers—a new post representing the up-grading of the current rank of central manager.

Mr Frehner's position will be that of a permanent management chairman.

Motorola sets up successions

By Paul Taylor in New York

MOTOROLA, the US electronics and semiconductor group, has announced a two-phase management transition designed to put in place the interlocking next generation of senior management.

Under the first stage of the reorganisation, Mr William Wetz, aged 59, currently vice chairman and chief operating officer, will become chief executive while retaining the vice chairman's title, at the start of July. He will succeed Mr Robert Galvin, 63, who is relinquishing the chief executive's job after 22 years but who is to remain as chairman.

Mr John Mitchell, 58, currently president and assistant chief operating officer, will remain president while becoming chief operating officer on the same date, before assuming the vice chairmanship in January, 1988, when the second round of senior management changes are to take effect.

At the start of 1988, Mr George Fisher, 45, who will assume the new position of senior executive vice president and deputy to the chief executive from July 1, will step up to become president and chief executive. Mr Fisher has been senior vice president and assistant general manager of Motorola's communications sector.

Mr Gary Tooker, 47, who is currently an executive vice president and general manager of the semiconductor products sector, will become senior executive vice president and chief corporate staff officer on July 1, succeeding Mr Robert Swift, 62, who is retiring after 33 years with the group. In 1988, Mr Tooker will become senior executive vice president and chief operating officer.

"The prime objective of these changes is to put key officials in place for the next generation of corporate leadership," Mr Galvin, the son of Motorola's founder, Mr Paul Galvin is expected to remain chairman of the \$5.5bn-a-year Illinois-based group past 1988.

The changes were warmly welcomed on Wall Street as an indication of continued management stability at the group and as evidence that the group was acknowledging the continued importance of the semiconductor group by preparing Mr Fisher to become chief executive.

Varian president resigns

By Louise Kehoe in San Francisco

MR JEROME MEYER, the president of Varian Associates, who joined the company just 18 months ago, has resigned. In a brief statement, the California electronics company described Mr Meyer's decision to resign as "an amicable one made by mutual agreement."

Mr Meyer's resignation came a few days after Varian announced that it expects to lose between \$4m and \$16m in the first quarter. That compares with a \$24m profit in the same period a year ago.

The company says that Mr Meyer's departure is unrelated to the loss, but offers no reason for his sudden resignation.

Mr Meyer's resignation from the company and board was of immediate effect. Mr Thomas Segs, chairman and chief executive, will take the added title of president and assume chief operating responsibilities.

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The increased offer will close at 1.00 p.m. on 2nd July, 1986 unless it has by or on that date become unconditional as to acceptances. Dixons has reserved the right, however, to revise, increase, and/or extend the increased offer in a competitive situation. If you require copies of documents, further information, or assistance in completing your Form of Acceptance, please contact S. G. Warburg & Co. Ltd. at: 33 King William Street, London EC4R 9AS, telephone 01-280 2222.

The value of Dixons increased offer (based on the value of Dixons securities being offered in exchange for Woolworth Shares) has been computed by reference to a price for Dixons Ordinary Shares of 335p, based on market prices at 3.30p.m. on 27th June, 1986, after adjusting for Dixons forecast 1985/86 final dividend of 2.4225p (net) per share, and an estimate of the value of a Dixons Convertible Preference Share of

98.15p. Cazenove & Co., stockbrokers to Dixons, have confirmed that, based on market conditions on 27th June, 1986, a reasonable estimate of the value of each Dixons Convertible Preference Share would have been 98.15p. The value of a Woolworth Share, which is quoted on an ex-dividend basis, has been based on market prices at 3.30p.m. on 27th June, 1986.

OFFER CLOSURES WEDNESDAY

This advertisement complies with the requirements of the Council of The Stock Exchange. It does not constitute an offer of, or invitation to the public to subscribe for or purchase, any securities.

U.S. \$150,000,000



Kingdom of Sweden

8 1/8% Bonds Due 1994

The following have agreed to subscribe or procure subscribers for the Bonds:

Credit Suisse First Boston Limited

- Bank of Tokyo International Limited
- Banque Bruxelles Lambert S.A.
- Banque Paribas Capital Markets Limited
- Deutsche Bank Capital Markets Limited
- Enskilda Securities Skandinaviska Enskilda Limited
- Morgan Grenfell & Co. Limited
- Morgan Stanley International
- Orion Royal Bank Limited
- Salomon Brothers International Limited
- Svenska International Limited
- Union Bank of Switzerland (Securities) Limited
- Bankers Trust International Limited
- Banque Nationale de Paris
- Citicorp Investment Bank Limited
- Dresdner Bank Aktiengesellschaft
- Merrill Lynch International & Co.
- Morgan Guaranty Ltd
- Nomura International Limited
- Post- och Kreditbanken, PKbanken
- Shearson Lehman Brothers International, Inc.
- Swiss Bank Corporation International Limited
- S. G. Warburg & Co. Ltd.

The issue price of the Bonds is 99 1/2 per cent. of their principal amount. Application has been made to the Council of The Stock Exchange for the Bonds to be admitted to the Official List. Interest will be payable annually in arrear on 7th July of each year, beginning on 7th July, 1987. Particulars of the Bonds and the Issuer are available in the statistical service of Exel Statistical Services Limited and copies may be obtained during usual business hours up to and including 2nd July, 1986 from the Company Announcements Office of The Stock Exchange and up to and including 14th July, 1986 from:

Credit Suisse First Boston Limited, 22 Bishopsgate, London EC2N 4BQ

Hoare Govett Ltd., Heron House, 319/325 High Holborn, London WC1V 7PB

Bankers Trust Company, Dashwood House, 69 Old Broad Street, London EC2P 2EE

30th June, 1986

This notice complies with the requirements of the Council of The Stock Exchange and does not constitute an offer of, or invitation to subscribe for or purchase, any securities.

U.S. \$150,000,000

Prudential Funding Corporation

(Incorporated in State of New Jersey, U.S.A.)

A Subsidiary of

The Prudential Insurance Company of America

7 3/4% Notes Due 1991

The following have agreed to subscribe, or procure subscribers, for the Notes:

Prudential-Bache Securities International

Nomura International Limited

Salomon Brothers International Limited

Union Bank of Switzerland (Securities) Limited

Bankers Trust International Limited

Goldman Sachs International Corp.

Merrill Lynch Capital Markets

Morgan Guaranty Ltd

Morgan Stanley International

The Nikko Securities Co., (Europe) Ltd.

S. G. Warburg & Co. Ltd.

Algemene Bank Nederland N.V.

Banque Bruxelles Lambert S.A.

Banque Paribas Capital Markets Limited

Chase Investment Bank

CIBC Limited

Crédit Lyonnais

Dai-ichi Kangyo International Limited

Dresdner Bank Aktiengesellschaft

Hambros Bank Limited

IBJ International Limited

Kreditbank International Group

LTCB International Limited

Mitsui Trust Bank (Europe) S.A.

Nippon Credit International (HK) Ltd.

Orion Royal Bank Limited

Swiss Bank Corporation International Limited

Wood Gundy Inc.

Yamaichi International (Europe) Limited

Application has been made to the Council of The Stock Exchange for the Notes, issued at a price of 100 3/4 per cent., to be admitted to the Official List.

Interest on the Notes, calculated as set out in the Exel Card dated June 27, 1986 is payable annually in arrears. The first payment is expected to be made on July 22, 1987.

Listing particulars containing information with regard to the U.S. \$150,000,000 Notes Due 1991 of Prudential Funding Corporation are available in the Exel Statistical Service and copies may be obtained during usual business hours up to and including July 2, 1986 from the Company Announcements Office of The Stock Exchange and up to and including July 14, 1986 from:

P-B Securities, Down, de Boer & Duckett Ltd. 9 Devonshire Square London EC2M 4HP England

The Chase Manhattan Bank, N.A. London Branch Woolgate House Coleman Street London EC2P 2HD England

June 30, 1986

CREDIT IMMOBILIER ET HOTELIER

KUWAITI DINARS 10,000,000
3 1/2% GUARANTEED BONDS DUE 1988
In accordance with Clause 4(A) of the Terms and Conditions...

KUWAIT INTERNATIONAL INVESTMENT CO. S.A.K.
Fiscal Agent
KUWAIT INTERNATIONAL INVESTMENT CO. S.A.K.
(AS FISCAL AGENTS)

UK COMPANY NEWS

Smurfit forecasts record year profits

Jefferson Smurfit has recovered from the poor second half to 1985-86 last year and is forecasting pre-tax profits ahead of last year's good start...

Tootal buys Clover Leaf for £7.5m

Tootal, the threads and textiles group, hopes to complete negotiations shortly for the acquisition of Clover Leaf, a family-owned manufacturer of table mats and melamine kitchenware...

Exploration Louisiana in £17m US deal

The Exploration Company of Louisiana, the London-quoted oil and gas exploration and production company, has approved the acquisition of certain lands, mineral interests and oil and gas production interests in South-western Louisiana...

Bett profits unchanged

Virtually unchanged pre-tax profits were yesterday reported by Bett Brothers - its activities include building and ancillary services, commercial vehicle distribution - for the half-year to February 28 1986...

Channel Tunnel

CHANNEL Tunnel Investment pre-tax profits fell from £3,230 to £2,961 for 1985. After tax of £800 (£968) earnings per share were 0.13p (0.15p).

We've merged and we're here.

From Monday, June 30th the combined public relations companies of Streets Financial and Financial Strategy will be renamed Streets Financial Strategy and located at

1 Bolt Court, Fleet Street, London EC4A 3DQ
Telephone: 01-583 1544. Telex: 21827. Fax: 01-583 0661

Streets Financial Advertising and Streets Financial Marketing will be located at 18 Red Lion Court, Fleet Street, London EC4A 3HT. Telephone: 01-353 1090. (Advertising Account Management only: 01-583 1523)

Wells Fargo International Financing Corporation N.V.
U.S. \$50,000,000
Guaranteed Floating Rate Subordinated Notes due 1996

Wells Fargo & Company
U.S. \$150,000,000
Floating Rate Subordinated Notes due 1992

The Princess Alice Hospice
We care for the terminally ill of all denominations, and urgently need donations to assist us with our running costs of more than £400,000 p.a.

USS 100,000,000
Household Bank f.s.b.
Collateralized Floating Rate Notes due June 1996

Granville & Co. Limited
Member of The National Association of Security Dealers and Investment Managers
8 Lovat Lane, London EC3R 8BP Telephone: 01-621 1212

The Whitbread Annual Report is now available. It contains the full story of another successful year: pre-tax profits to 1st March 1986 were up to £129.6 million, a 17.7% increase on 1985.

BEER, BREWING AND WHOLESALING

Beer, brewing and wholesaling achieved a 14.8% increase in turnover to £586.3 million. Operating profits of £81.2 million (a 15.2% increase) accounted for 48% of the Group's total operating profit.

In a market which was around 1% down on the previous year, beer volumes were well up. Heineken and Stella Artois, supported by Kaltenberg Diat Pils, pushed lager sales to 47% of our total beer trade...

Our take-home market share reached its highest level for many years, and Breweries Division maintained full supply throughout the year, with product quality better than ever before.

RETAILING

Retailing turnover was up to £633.2 million, a 13.1% increase. Operating profits rose to £55.5 million, 33% of the total operating profit.

A high level of capital investment in Whitbread Inns was maintained, and they performed well, with a substantial growth in profit.

Beefeater, Thresher and Pizza Hut all traded strongly, and there were encouraging performances from newer businesses such as Roast Inns, Aureon Discotheques, Coaching Inns and Country Club Hotels.

WHITBREAD & COMPANY
HAVE ONE ON THE HOUSE
ESTD 1742

WINES AND SPIRITS

Despite a decrease in turnover of 4.8% largely due to the impact of foreign exchange movements, operating profits increased by 26.2% to £33.2 million.

Stowells and Langenbach produced good profits, and Long John exports were up 10%.

Whitbread North America exceeded its profit budget and gained market share. It's now among the top ten suppliers of wines and spirits in the U.S. with brands such as Cutty Sark, Scoresby Rare, Canadian LTD, Benedictine, Delamain Cognac, Laphroaig, Antinori and Bollinger.

THE FUTURE

In the first three months of 1986, off-licence and restaurant sales have increased, and beer volume is well up on last year.

We're confident of achieving another satisfactory annual result, and by way of celebration, we'd be delighted if you'd have one on the house: telephone our Publications Department on 01-606 4455, or complete the coupon and we'll send you a free copy of our Annual Report.

PLEASE SEND ME A COPY OF THE 1986 WHITBREAD ANNUAL REPORT AND ACCOUNTS.

NAME

ADDRESS

POSTCODE

WHITBREAD

PUBLICATIONS DEPARTMENT, WHITBREAD AND COMPANY PLC, BREWERY, CHISWELL STREET, LONDON EC1Y 4SD. TELEPHONE 01-606 4455.

BUSINESSMAN'S DIARY

TRADE FAIRS AND EXHIBITIONS
July 28-August 3
Royal Show (0203 568100)
July 1-5
International Production Engineering and Conference - PEP (01-891 5061)

OVERSEAS TRADE FAIRS
July 7-11
International Powder Metallurgy Exhibition and Conference (01-493 3888)
July 21-24
International Laboratory Equipment Exhibition - LABEX (021-705 6707)

BUSINESS AND MANAGEMENT CONFERENCES

July 13
Institute of Energy Economics: The future of UK North Sea oil and gas (01-398 5778)
July 2
The Industrial Society: We're making it happen - industry works for people (01-839 4500)

PARLIAMENTARY DIARY

Commons and Lords business this week

TODAY
Commons: Debate on motion to approve the statement on the defence estimates 1986.
Traffic Regulation Bill, Consumer Safety Bill, etc.

TOMORROW
Commons: Continued debate on a motion to approve the statement on the European Communities (Amendment) Bill.

WEDNESDAY
Commons: Motions on Social Security regulations, until 7.30 pm.
Lords: Involuntary Bill (report).

THURSDAY
Commons: Debate on outstanding reports of the Public Accounts Committee to which the Government has replied.

FRIDAY
Commons: Private members' bills.
Lords: Motion to take note of the situation in South Africa.

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interim or final.

TODAY
Company Meetings:
Aberdeen 11.30 am.
Aberdeen 11.30 am.
Aberdeen 11.30 am.

WEDNESDAY
Company Meetings:
Aberdeen 11.30 am.
Aberdeen 11.30 am.
Aberdeen 11.30 am.

THURSDAY
Company Meetings:
Aberdeen 11.30 am.
Aberdeen 11.30 am.
Aberdeen 11.30 am.

FRIDAY
Company Meetings:
Aberdeen 11.30 am.
Aberdeen 11.30 am.
Aberdeen 11.30 am.

Financial Times Monday June 30 1986

Company Meetings:
Aberdeen 11.30 am.
Aberdeen 11.30 am.
Aberdeen 11.30 am.

WEDNESDAY JULY 2
Company Meetings:
Aberdeen 11.30 am.
Aberdeen 11.30 am.
Aberdeen 11.30 am.

THURSDAY JULY 3
Company Meetings:
Aberdeen 11.30 am.
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FRIDAY JULY 4
Company Meetings:
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Company Meetings:
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Aberdeen 11.30 am.
Aberdeen 11.30 am.

SUMINOE TEXTILE CO., LTD. Osaka, Japan. DM 50,000,000 1 1/4 Bonds due 1993 with Warrants attached. The Fuji Bank, Limited Tokyo, Japan.

WESTDEUTSCHE LANDESBANK GROSZENTRALE. YAMAICHI INTERNATIONAL (DEUTSCHLAND) GMBH. NOMURA EUROPE GMBH. FUJI INTERNATIONAL FINANCE Limited. CSFB-EFFECTENBANK AG. ROBERT FLEMING & CO. Limited. SCHWEIZERISCHE BANKGESELLSCHAFT (DEUTSCHLAND) AG. YASUDA TRUST EUROPE Limited.

Bank of Tokyo (Deutschland) Aktiengesellschaft. Deutsche Bank Aktiengesellschaft. Dresdner Bank Aktiengesellschaft. Bayerische Handelsbank Aktiengesellschaft. Berliner Handelsbank Aktiengesellschaft. BNP Paribas (Deutschland) Aktiengesellschaft. Citibank (Deutschland) Aktiengesellschaft. Credit Commercial de France.

EQUITIES

Table with columns: New Issue, Last Price, High, Low, Stock, Change, %.

FIXED INTEREST STOCKS

Table with columns: New Issue, Last Price, High, Low, Stock, Change, %.

"RIGHTS" OFFERS

Table with columns: New Issue, Last Price, High, Low, Stock, Change, %.

Renunciation date usually last day for doing five of stamp duty. Annualized dividend, if figures based on prospectus estimates, or assumed dividend and yield, or assumed dividend and yield after scrip issue.

Can Europe catch up? A bond report of a series of articles "Can Europe catch up?" and "Towards a Free Trade Community"...

F.T. CROSSWORD PUZZLE No. 6,060

Crossword puzzle grid with clues for Across and Down.

ACROSS 1 Rich man first to take clothes off (6) 2 What over-enthusiastic slimmer may become - a warning to others? (4, 5) 3 Opens with sudden movements (6) 4 Give pen-picture of French writer (8) 5 Left a novice to find the entrance (6) 6 Occult power youth leader has to watch (6) 7 Agreement to draw together (8) 8 School following lines laid down by European? (6) 9 Does the spade work in providing accommodation (6) 10 Make just estimation of rise in value (10) 11 Flighty girl who gets flustered (7) 12 Cleaning materials that put men off apparently (10) 13 Sublime part of year (6) 14 Request certain to give delight (8) 15 Produce peculiar green tea perhaps (8) 16 Draughtsman getting the bullet? (6) 17 Stacker - to find scavenger leading journalist (8) 18 Divorced by advertisement about training agent (6)

AUTHORISED UNIT TRUSTS

Main table listing various unit trusts with columns for Name, Investment Objective, Assets Under Management, and other details.

AUTHORISED UNIT TRUSTS & INSURANCES

Main table containing financial data for various unit trusts and insurance companies, including names, addresses, and performance metrics.

INSURANCES

Table listing various insurance policies and their details, including company names and policy types.

Life Assurance

Table listing life assurance policies and their details, including company names and policy types.

Investment Funds

Table listing investment funds and their details, including company names and fund types.

Property Funds

Table listing property funds and their details, including company names and fund types.

Equity Funds

Table listing equity funds and their details, including company names and fund types.

Bond Funds

Table listing bond funds and their details, including company names and fund types.

Money Funds

Table listing money funds and their details, including company names and fund types.

Specialist Funds

Table listing specialist funds and their details, including company names and fund types.

International Funds

Table listing international funds and their details, including company names and fund types.

Real Estate Funds

Table listing real estate funds and their details, including company names and fund types.

Commodity Funds

Table listing commodity funds and their details, including company names and fund types.

Other Funds

Table listing other funds and their details, including company names and fund types.

INSURANCE, OVERSEAS & MONEY FUNDS

Table of insurance and overseas funds including Standard Life Assurance, Prudential, and various international investment funds.

Main table of insurance, overseas, and money funds, including sections for UK Overseas, Foreign & Colonial, and various international investment funds.

Table of money market funds and bank accounts, including sections for Money Market Funds and Money Market Bank Accounts.

Notes and traditional options section at the bottom of the page, including a list of traditional options and their rates.

BRITISH FUNDS

Table of British Funds with columns for Name, Shares, Price, and Dividend. Includes sections for 'Shorts (Lives up to Five Years)', 'Over Fifteen Years', and 'Undated'.

AMERICANS—Cont.

Table of American Stocks with columns for Name, Shares, Price, and Dividend. Includes sections for 'BANKS, HP & LEASING', 'CORPORATION LOANS', and 'COMMONWEALTH & AFRICAN LOANS'.

LONDON SHARE SERVICE

BUILDING, TIMBER, ROADS—Cont.

Table of Building, Timber, and Roads stocks with columns for Name, Shares, Price, and Dividend.

DRAPERY & STORES—Cont.

Table of Drapery and Stores stocks with columns for Name, Shares, Price, and Dividend.

ELECTRICALS

Table of Electrical stocks with columns for Name, Shares, Price, and Dividend.

CHEMICALS, PLASTICS

Table of Chemicals and Plastics stocks with columns for Name, Shares, Price, and Dividend.

DRAPERY AND STORES

Table of Drapery and Stores stocks with columns for Name, Shares, Price, and Dividend.

BEERS, WINES & SPIRITS

Table of Beers, Wines, and Spirits stocks with columns for Name, Shares, Price, and Dividend.

BUILDING, TIMBER & ROADS

Table of Building, Timber, and Roads stocks with columns for Name, Shares, Price, and Dividend.

AMERICANS

Table of American Stocks with columns for Name, Shares, Price, and Dividend.

ENGINEERING—Continued

Table of Engineering stocks with columns for Name, Shares, Price, and Dividend.

Table of Engineering stocks with columns for Name, Shares, Price, and Dividend.

Table of Engineering stocks with columns for Name, Shares, Price, and Dividend.

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Table of Engineering stocks with columns for Name, Shares, Price, and Dividend.

Table of Engineering stocks with columns for Name, Shares, Price, and Dividend.

INDUSTRIALS (Miscel.)

Table of Industrial (Miscellaneous) stocks with columns for Name, Shares, Price, and Dividend.

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INDUSTRIALS—Continued

Table of industrial stocks including Johnson & Johnson, American Cyanamid, and others. Columns include Stock, Price, and % Change.

LEISURE—Continued

Table of leisure stocks including American Leisure, Leisure Enterprises, and others. Columns include Stock, Price, and % Change.

PROPERTY—Continued

Table of property stocks including American Property, Property Development, and others. Columns include Stock, Price, and % Change.

INVESTMENT TRUSTS—Cont.

Table of investment trusts including American Investment Trust, Trust for the Future, and others. Columns include Stock, Price, and % Change.

FINANCE, LAND—Cont.

Table of finance and land stocks including American Finance, Land Development, and others. Columns include Stock, Price, and % Change.

MINES—Continued

Table of mine stocks including American Mines, Mines Development, and others. Columns include Stock, Price, and % Change.

INSURANCE

Table of insurance stocks including American Insurance, Insurance Development, and others. Columns include Stock, Price, and % Change.

PAPER, PRINTING, ADVERTISING

Table of paper, printing, and advertising stocks including American Paper, Printing, and Advertising. Columns include Stock, Price, and % Change.

SHIPPING

Table of shipping stocks including American Shipping, Shipping Development, and others. Columns include Stock, Price, and % Change.

SOOTH AFRICANS

Table of South African stocks including American South Africans, South Africans Development, and others. Columns include Stock, Price, and % Change.

TEXTILES

Table of textile stocks including American Textiles, Textiles Development, and others. Columns include Stock, Price, and % Change.

TOBACCO

Table of tobacco stocks including American Tobacco, Tobacco Development, and others. Columns include Stock, Price, and % Change.

PROPERTY

Table of property stocks including American Property, Property Development, and others. Columns include Stock, Price, and % Change.

FINANCE, LAND

Table of finance and land stocks including American Finance, Land Development, and others. Columns include Stock, Price, and % Change.

INVESTMENT TRUSTS

Table of investment trusts including American Investment Trust, Trust for the Future, and others. Columns include Stock, Price, and % Change.

FINANCE, LAND, etc

Table of finance, land, and other stocks including American Finance, Land, and others. Columns include Stock, Price, and % Change.

MINES

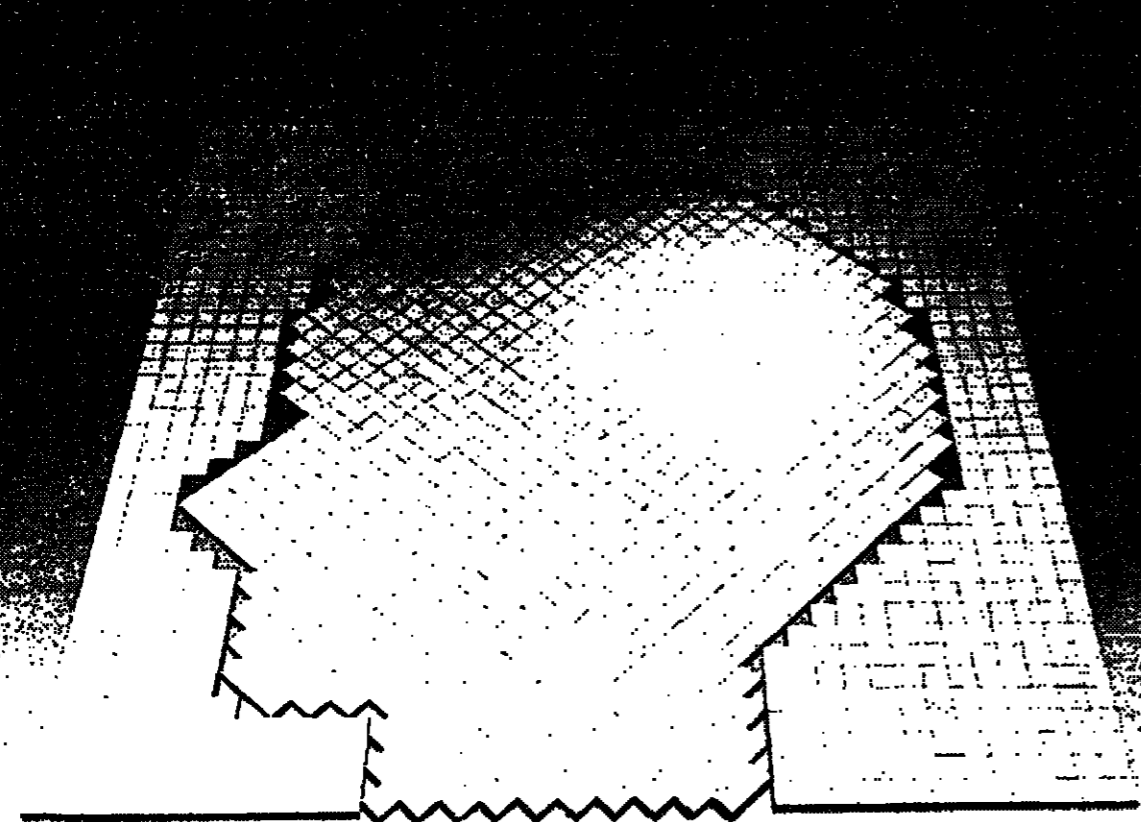
Table of mine stocks including American Mines, Mines Development, and others. Columns include Stock, Price, and % Change.

REGIONAL & IRISH STOCKS

Table of regional and Irish stocks including American Regional, Irish Stocks, and others. Columns include Stock, Price, and % Change.

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LTCB. The creative solution to financial needs.



At LTCB we're one of the world's leading international banks because we specialize in looking at business creatively.

If you need creative international financing, project financing, guarantees, foreign exchange services including swap arrangements, then call us.

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We create financial futures.

The Long-Term Credit Bank of Japan, Ltd.



LTCB

Head Office & International Banking Centre: Chiyomachi, Tokyo, Japan Tel: 211-5111

CONSTRUCTION

The Grand Hotel is restored to glory

BY JOAN GRAY, CONSTRUCTION CORRESPONDENT

THE GRAND HOTEL in Brighton, devastated by the IRA bomb which exploded above the room where Mrs Margaret Thatcher, the Prime Minister, was staying on the night of October 12, 1984, will reopen for its first guests in August.

It will have been completely revamped, repaired and refurbished in a \$10.5m contract carried out by the Llewellyn Group.

The £1m was spent repairing the bomb damage and £7m on a complete refurbishment to restore the ornate Victorian hotel—built in 1862—its former glory as a showpiece on Brighton's seaford.

"Its strength lies in the grandness of the building, which is its way of competing with the more modern hotels in Brighton, and our job has been to restore this," said Mr David Llewellyn, the contractor's managing director and newly-installed president of the Chartered Institute of Building.

His company, based further along the south coast at Eastbourne, has been working for the hotel's management for 40 years.

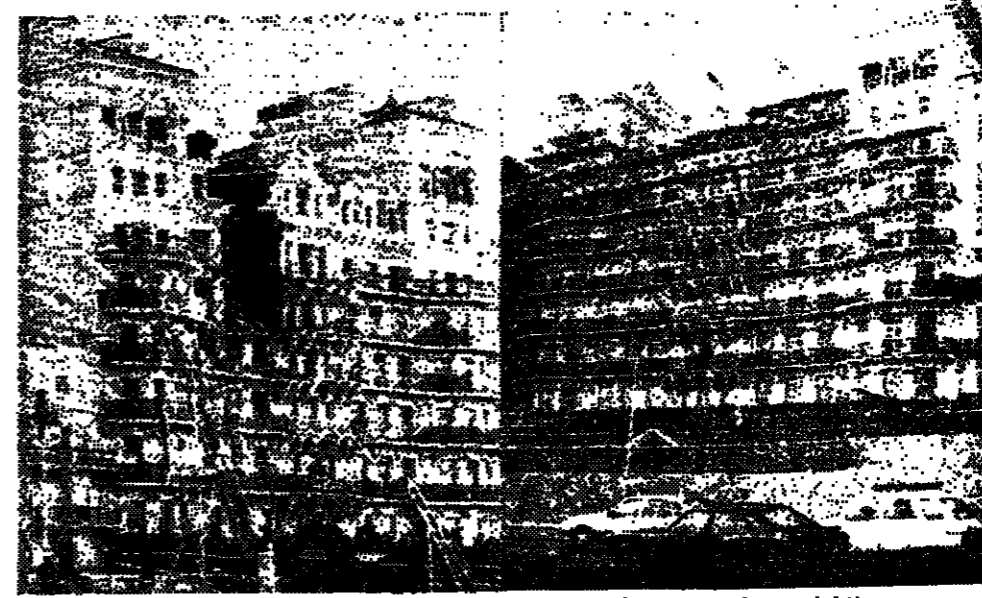
Llewellyn won the contract to rebuild the Grand in competition with Longley, another locally-based builder, which started the urgent repair work on the night of the explosion.

The management contract was awarded after both contractors had been interviewed on their plans for the job by the hotel's owners, Greenall Whitley. Llewellyn quoted the lowest price.

The main structural work has been to rebuild the floors and walls which were shattered by the blast and by the 60 cm concrete chimney stack which was dislodged in the explosion. It fell through seven floors, destroying the central section of the building and burying senior members of the Conservative Party, including Mr Norman Tebbit.

Once the debris and remains of the old timber floors were cleared away, the structure was rebuilt with a reinforced concrete frame and reinforced concrete floors to bring it up to modern standards.

The chimney which was destroyed in the blast has been replaced with a glass fibre replica moulded from its neighbour— which has also been replaced with a glass



Restoration after the bomb damage (left) is almost complete (right).

fibre copy, as have many of the decorative carvings and the huge stone shield in the centre of the roof.

Mr Llewellyn said: "The decorative shield, carvings and chimneys were essential to the appearance of the building, but we replaced them with replicas in glass fibre to cut the huge weight the new roof would have to carry."

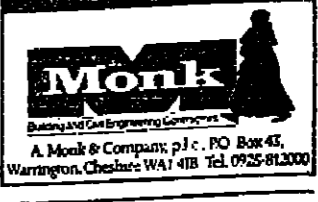
The contract also involved replacing and repairing the delicate Victorian mouldings of shields and flower which had been damaged in the blast or eaten away by dry rot.

The new mouldings were prepared and painted by subcontractor Clark and Fenn, a specialist in fibre plaster which had, as Llewellyn's project manager Mr David Oswald put it, "one room just moulding tiny flowers for a whole week."

The refurbishment has also involved redecorating and modernising all the bedrooms— including covering five rooms along the front of the hotel to a new Presidential suite, complete with accommodation for security guards for those who would once have brought their briefcases and ladies maids.

It has also included installing a new swimming pool, jacuzzi and nightclub in the basement, and restoring all the public areas to their former state of swagged and tilted splendour, complete with new chandeliers.

Monk build to last



The Falcons

TARMAC CONSTRUCTION are pleased to be associated with yet another quality multi-million pound refurbishment development for REGALIAN PROPERTIES PLC.

This is a Design and Management Contract in association with Gablecross Project Management Ltd and the GTD Partnership.

Major re-landscaping design by Brian King Associates. TARMAC CONSTRUCTION are managing over 20 Package Contractors, some of whom are listed below:-

- Ken Nagus Ltd - External Cleaning
P. J. Carey (Contractors) Ltd - Ground works, Hard landscaping
Farren & Sons - Plumbers and Drainage
Custom Made Commercial Ltd - Windows
Hammond & Chappress - Lifts

Tarmac Construction, 168 Laverider Hill, London SW11 5PG. Telephone: 01 228 2333

Italex Limited. U.S. \$230,000,000. Unsecured Floating Rate Notes due 1989 to 1992. Morgan Grenfell & Co. Limited.

CFX Credit for Exports PLC. U.S. \$155,000,000. Unsecured Floating Rate Notes due 1985 to 1992. Morgan Grenfell & Co. Limited.

TELEFONOS DE MEXICO, S.A. U.S. \$40,000,000 SERIES 17. Six Month Notes Issued in Series under a Note Purchase Facility.

The Republic of Italy US \$300,000,000. Floating Rate Notes due 1987. Bank of America International Limited.

Copenhagen Handelsbank A/S. U.S. \$100,000,000 Subordinated Floating Rate Notes Due 2000. Morgan Guaranty Trust Company of New York, London.

BASE LENDING RATES table with columns for bank names and interest rates. Includes ABN Bank, Allied Dunbar & Co, etc.

CREDIOP. U.S. \$150,000,000 Floating Rate Participation Notes Due 1993. CitiBank.

Salinas y Rocha, S.A. U.S. \$25,000,000 Floating Rate Notes Due 1988. CitiBank.

CONTINENTAL ILLINOIS OVERSEAS FINANCE CORPORATION N.V. GUARANTEED FLOATING RATE SUBORDINATED NOTES DUE 1994. CitiBank.

The Kingdom of Belgium. U.S. \$300,000,000 Floating Rate Notes Due May 2005. Morgan Guaranty Trust Company of New York.

CITICORP U.S. \$350,000,000 Subordinated Floating Rate Notes Due November 27, 2035. CitiBank.

CITICORP U.S. \$500,000,000 Subordinated Floating Rate Notes Due October 25, 2005. CitiBank.

WORLD STOCK MARKETS

AUSTRIA table with columns for High, Low, June 27, Price, and Change. Includes entries like 2,200 Creditanstalt, 1,000 BAWAG, etc.

DENMARK table with columns for High, Low, June 27, Price, and Change. Includes entries like 424 315 Andelsbanken, 670 515 Belfica Skand, etc.

GERMANY table with columns for High, Low, June 27, Price, and Change. Includes entries like 360 265 AEG, 3,275 1,190 Allianz, etc.

NETHERLANDS table with columns for High, Low, June 27, Price, and Change. Includes entries like 303 228 KMO, 125 81 Klockner, etc.

SWEDEN table with columns for High, Low, June 27, Price, and Change. Includes entries like 230 176 ABA, 578 485 Alfa Laval, etc.

ITALY table with columns for High, Low, June 27, Price, and Change. Includes entries like 24,995 19,960 Banco Comite, 668 625 Bascogi-IRIS, etc.

NORWAY table with columns for High, Low, June 27, Price, and Change. Includes entries like 172.5 142 Bergens Bank, 175 153 Christiania Bank, etc.

FRANCE table with columns for High, Low, June 27, Price, and Change. Includes entries like 1,630 1,473 Emprunt 4 1/2, 7,953 7,450 Emprunt 7 1/2, etc.

FRANCE (continued) table with columns for High, Low, June 27, Price, and Change. Includes entries like 4,900 3,640 Legrand, 4,950 3,659 Lyell Bank, etc.

FRANCE (continued) table with columns for High, Low, June 27, Price, and Change. Includes entries like 345 268 ADF Holding, 90.2 86.8 AEG, etc.

HONG KONG table with columns for High, Low, June 27, Price, and Change. Includes entries like 17.9 16.1 Bank East Asia, 57.0 51.8 Cashay Pacific, etc.

BEELGIUM/LUXEMBOURG table with columns for High, Low, June 27, Price, and Change. Includes entries like 3,500 3,280 S.B.L., 15,000 14,000 Belg. Gen. Lend, etc.

AUSTRALIA table with columns for High, Low, June 27, Price, and Change. Includes entries like 5.80 5.56 AGL, 10.8 11.5 Adelaide Stearns, etc.

AUSTRALIA (continued) table with columns for High, Low, June 27, Price, and Change. Includes entries like 2.00 1.98 BHP, 1.20 1.18 BHP, etc.

SWITZERLAND table with columns for High, Low, June 27, Price, and Change. Includes entries like 1.80 1.75 NIKO, 1.80 1.75 NIKO, etc.

SINGAPORE table with columns for High, Low, June 27, Price, and Change. Includes entries like 1.81 1.75 Boustead Hldgs, 2.38 2.17 Gold Storage, etc.

SOUTH AFRICA table with columns for High, Low, June 27, Price, and Change. Includes entries like 3.00 2.95 J.S. Absorbed, 2.00 1.95 J.S. Allied Tech, etc.

JAPAN table with columns for High, Low, June 27, Price, and Change. Includes entries like 1,070 1,130 Ajinomoto, 1,080 1,140 All Nippon Air, etc.

JAPAN (continued) table with columns for High, Low, June 27, Price, and Change. Includes entries like 1,200 1,250 Asahi, 1,200 1,250 Asahi, etc.

JAPAN (continued) table with columns for High, Low, June 27, Price, and Change. Includes entries like 1,200 1,250 Asahi, 1,200 1,250 Asahi, etc.

SPAIN table with columns for High, Low, June 27, Price, and Change. Includes entries like 990 415 Bco Bilbao, 705 347 Bco Central, etc.

CANADA table with columns for High, Low, June 27, Price, and Change. Includes entries like 2076 AMCA Int, 628 Abitibi, etc.

TORONTO table with columns for High, Low, June 27, Price, and Change. Includes entries like 2076 AMCA Int, 628 Abitibi, etc.

OVER-THE-COUNTER table with columns for Stock, Sales, High, Low, Last, and Change. Includes entries like Puffin, Puffin, Puffin, etc.

OVER-THE-COUNTER (continued) table with columns for Stock, Sales, High, Low, Last, and Change. Includes entries like RAX, RAX, RAX, etc.

MONTREAL table with columns for High, Low, June 27, Price, and Change. Includes entries like 1825 Bank Mont, 380 Bombardier, etc.

MONTREAL (continued) table with columns for High, Low, June 27, Price, and Change. Includes entries like 1825 Bank Mont, 380 Bombardier, etc.

MONTREAL (continued) table with columns for High, Low, June 27, Price, and Change. Includes entries like 1825 Bank Mont, 380 Bombardier, etc.

MONTREAL (continued) table with columns for High, Low, June 27, Price, and Change. Includes entries like 1825 Bank Mont, 380 Bombardier, etc.

NEW YORK Indices table with columns for Index, June 25, June 26, June 27, June 28, June 29, June 30, and % Change. Includes entries like DOW, S&P 500, NYSE, etc.

CANADA table with columns for High, Low, June 27, Price, and Change. Includes entries like 172.5 142 Bergens Bank, 175 153 Christiania Bank, etc.

NEW YORK ACTIVE STOCKS table with columns for Stock, Price, and Change. Includes entries like Volume, NYSE, AMEX, etc.

NEW YORK ACTIVE STOCKS (continued) table with columns for Stock, Price, and Change. Includes entries like Volume, NYSE, AMEX, etc.

When will it dawn on you? Advertisement for Financial Times. Text: 'In many of North America's major business centres, coast-to-coast, the Financial Times is being delivered in time for breakfast. It's an eye-opening development... made possible because the FT is now printed in the U.S. Transmitted from London via satellite each evening, it goes on press during the night and is ready for distribution before midnight. Imagine. For the first time, you can get the FT when you need it most: before the pressures of business start to encroach on your time. As the day begins you'll be in touch with the same developments your colleagues overseas are reading about. You won't have to play catch-up. And that, as we all know, makes all the difference in the world. Between financial opportunities realized...and opportunities lost. Here are the cities where the FT is available by hand-delivery each morning. Atlanta, Boston, Chicago, Dallas, Detroit, Miami, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, Seattle, San Francisco, Washington, Montreal and Toronto. On the list? Good.'

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

Closing prices, June 27

Main table of stock closing prices with columns for stock name, price, and change. Includes sub-sections for 12 Month, D D D, and H H H.

NYSE COMPOSITE CLOSING PRICES

AMEX COMPOSITE CLOSING PRICES

Table of NYSE Composite Closing Prices, including columns for stock symbols, prices, and volume. Includes sub-sections like 'Continued from Page 34' and 'Sales figures are unofficial'.

Table of AMEX Composite Closing Prices, including columns for stock symbols, prices, and volume. Includes sub-sections like 'Continued from Page 34' and 'Sales figures are unofficial'.

OVER-THE-COUNTER Nasdaq national market, closing prices, June 27

Table of Over-the-Counter (Nasdaq) closing prices, including columns for stock symbols, prices, and volume. Includes sub-sections like 'Sales figures are unofficial'.

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CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGES

Dollar to fall in spite of support

BY COLIN MELHAM

The dollar is variable, within a fairly narrow range at present, and in the absence of unforeseen events there is little reason to expect any great move until the middle of July, when second quarter US gross national product growth is made known.

The long weekend holiday in the US, for Independence Day on July 4, and the Japanese general election on July 6, are likely to keep trading thin and nervous during the early part of next month.

During the last two months the dollar has been trading within a range of DM 2.20 to DM 2.30 against the D-Mark, apart from a brief fall to DM 2.17 in mid-May, and a climb to DM 2.35 in late May.

The main factor limiting the downside, as far as the dollar is concerned, is fear of central bank intervention, but providing trading remains orderly this fear may be exaggerated.

On the other hand the Bank of Japan has been fairly active on a day-to-day basis, but not on a very large scale.

£ IN NEW YORK

Table with columns: June 27, Close, Prev. close. Rows: C Spot, 1 month, 3 months, 6 months, 12 months.

Forward premiums and discounts apply to the US dollar.

reaction can be quite stark, particularly when economic fundamentals are pointing in the opposite direction.

This happened last week, when the dollar broke through DM 2.35, but failed to establish itself above DM 2.27, and within a few days was threatening DM 2.20.

The main factor limiting the downside, as far as the dollar is concerned, is fear of central bank intervention, but providing trading remains orderly this fear may be exaggerated.

On the other hand the Bank of Japan has been fairly active on a day-to-day basis, but not on a very large scale.

Members of President Reagan's Administration have indicated on several occasions that unless countries with strong economies, such as Germany and Japan, are prepared to accept faster economic growth rates the dollar will continue to fall to correct the imbalance of trade against the US.

It should be noted however that in spite of a fall in the value of the dollar to around DM 2.20 from nearly DM 3.00 since the Group of Five agreement made in New York last September, and to Y168 from Y240 over the same period, there has been no sign of rising US exports.

The deficit with Japan for the first five months of 1986 was \$20bn, against \$19.8bn between January and May 1985, and for last month was \$4.99bn, compared with \$4.7bn in April.

The overall US trade deficit of \$14.21bn in May reflected a steep rise in the volume of oil imports, but was well above market forecasts, which ranged from \$11.5bn to \$13.5bn.

Trying to figure out why the dollar on Friday, but dealers still appeared worried by the threat of central bank intervention and were unwilling to push the US currency below DM 2.20 and Y165.

CURRENCY MOVEMENTS

Table showing currency movements for various countries like Sterling, Canadian dollar, Australian dollar, etc.

OTHER CURRENCIES

Table showing other currencies like Argentine, Australian, Canadian, etc.

POUND SPOT - FORWARD POINT

Table showing pound spot and forward rates for various terms.

FORWARD RATES AGAINST STERLING

Table showing forward rates against sterling for various currencies.

MONEY MARKETS

Bank indicates caution. The Bank of England gave some fairly clear indications last week that UK interest rates would not be reduced in the next few weeks.

NEW YORK RATES

Prime rate 8.75%. Broker loan rate 7.0%. Fed funds at 7.0%. Treasury bills and bonds rates.

WEEKLY CHANGE IN WORLD INTEREST RATES

Table showing weekly change in world interest rates for various locations like London, Tokyo, Brussels, etc.

MONEY RATES

Table showing money rates for various locations like Frankfurt, Zurich, Amsterdam, etc.

LIFE LONG CALL FUTURES OPTIONS

Table with columns: Strike, Price, Call, Put, etc. for various currencies.

LIFE LONG CALL FUTURES OPTIONS

Table with columns: Strike, Price, Call, Put, etc. for various currencies.

LONDON

Table showing London market rates for various instruments like National Gilt, Treasury, etc.

PHILADELPHIA SE E/F OPTIONS

Table showing Philadelphia SE E/F options for various currencies.

CURRENCY RATES

Table showing current currency rates for various countries.

CHICAGO

Table showing Chicago market rates for various instruments.

DOLLAR SPOT - FORWARD AGAINST DOLLAR

Table showing dollar spot and forward rates against the dollar.

EXCHANGE CROSS RATES

Table showing exchange cross rates for various currencies.

EURO-CURRENCY INTEREST RATES

Table showing euro-currency interest rates for various currencies.

BANK OF ENGLAND TREASURY BILL TENDER

Table showing Bank of England Treasury Bill tender details.

FT LONDON INTERBANK FIXING

Table showing FT London interbank fixing rates.

LONDON MONEY RATES

Table showing London money rates for various instruments.



Ente Nazionale per l'Energia Elettrica. U.S. \$300,000,000. Floating Rate Notes Due 2005. The Republic of Italy.

WestLB. Eurobonds - DM Bonds - Schuldscheine for dealing prices call.

WestLB. Marketmakers in Deutschmark Bonds.

CITICORP. Subordinated Floating Rate Notes Due January 30, 1998.

THE GREYHOUND CORPORATION. Listing particulars relating to Greyhound are available in the Extel Statistical Service.